THE PROVINCES OF CANADA SERIES

Manitoba

Agnes Florence

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THE
PROVINCES OF CANADA

A SOCIAL STUDIES SERIES

Manitoba

AGNES FLORENCE

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THE PROVINCES OF CANADA SERIES

Manitoba

by

Agnes Florence

THE COPP CLARK CO., LIMITED - TORONTO

Manitoba Sampler

(*See opposite page*)

MANITOBA SAMPLER

DESIGN: Executed by Mr. H. Eric Bergman, artist, a member of the Design Committee of the Canadian Handicrafts Guild. Miss G. Hutchinson, Mrs. W. Mountford, Mrs. E. T. Howorth assisted Mr. Bergman in transferring the design to the material.

FABRIC: Woven by Mrs. Gustave Roos (Swedish Group), teacher in our Weaving School, and assisted by Mrs. C. M. Scott. The warp of the fabric is cotton and the weft is linen.

EMBROIDERY: Done by representatives of eleven national groups affiliated with the Manitoba branch of the Canadian Handicrafts Guild, also by Guild members and by Shop workers.

Stitch	*Sampler*	
Chain	Border and 49th Parallel	Mrs. R. J. Scott
Crewel	Buffalo and rocks	Miss M. Whitwoeth
Cross-stitch	Boundary	Mrs. C. A. Hangoe (Danish group)
French knot	Anemone	Mrs. R. J. Scott
Hemming		Miss Esther Newman
Herringbone	Wheat	Mrs. J. Anderson
Matyo	Daisies	Mrs. Z. Istvanffy (Hungarian group)
Needlepoint	Parliament bldg. Elevators	Mrs. A. G. Pawlik (Ukrainian group)
	Churchill	
	Customs House	Mrs. H. K. Thom (Polish)
Outline	Rivers and Lakes	Mrs. W. M. Hugill
Outline and satin	Evergreens	Mrs. J. Anderson
Petitpoint	Log cabin	Mrs. Z. Istvanffy
	Cross	Miss Esther Newman
Running	Indian tepees	Mrs. E. Amos
Satin, long and short or stem	Iris and Columbine	Mrs. E. T. Howorth
	Wild rose	Miss H. Wilson
	Gentian	Mrs. Finnur Johnson (Icelandic group)
	Tiger lily	Mme Ragot (French group)
	Pink lady slipper, bluebell and Pitcher plant	Mrs. R. J. Scott
Special stitch	Railroads	Mrs. W. P. Lowe and Mrs. J. M. Horne
Variety of stitches	Riding Mountain National Park, Polar bear, whale, wolf, geese, emblem, yellow lady slipper, dog berry, bunchberry, marsh marigold, ducks	Mrs. T. Wnuk Mrs. E. Dowton

Table of Contents

Winnipeg Free Press

La Vérendrye Memorial, St. Boniface

Land of the Buffalo

FAR inland, half way between the Atlantic and the Pacific, lies Manitoba, the oldest of Canada's three prairie provinces.

Hidden away as it was, almost in the heart of North America, it was not easily discovered. It was many years after Columbus before adventurers from Europe found their way to these shores or paddled their canoes along these rivers and lakes. When, in 1610, Henry Hudson tried to sail around the north end of America, he found the bay which carries his name, but he did not touch Manitoba. His men mutinied and set him adrift in an open boat to die. In 1612, Thomas Button, searching for Hudson, sailed along Manitoba's coastline and landed near the mouth of Nelson River. In 1619, Jens Munck, of Denmark, came to the Churchill River. Yet none of these men stayed more than one winter on those barren shores before he set out again for home.

RADISSON AND GROSEILLIERS

It was not until almost fifty years later that gay and daring Pierre Radisson ventured into the North-West by canoe from the Great Lakes and returned home to sing its praises and to show his rich cargo of furs. He was the first of the explorers and fur traders to find his way to western forests

and lakes. Radisson and his partner, Groseilliers, took rich furs from this country far ahead of other men. Back at Montreal, they lost most of those furs to a greedy governor; but they came again to the North-West by Hudson's route, and they knew what they were looking for.

THE HUDSON'S BAY COMPANY

Coat of Arms of the Hudson's Bay Company

It was Radisson and Groseilliers who led the Company of Adventurers of England to send ships to the shores of "the Bay" where furs were thicker and richer than they were in warmer climates. With one shipload of furs delivered to London, Groseilliers proved to the English that the northland fur trade was worth their while. A group of young men under the leadership of the king's cousin, Prince Rupert, banded together to make their fortunes. They formed, in 1670, the company that became known as the Hudson's Bay Company. For two hundred years that company had a special licence, or "charter", from the king. It drew great shiploads of fine furs to London and brought to the unsettled West the only law it knew.

The early part of Manitoba's story is the story of the Hudson's Bay Company. Through the Company the first white men to stay for more than a year came to the shores of the Bay. Fort Nelson, which later was renamed York Factory, was built at the mouth of the Nelson River. Fort Prince of Wales, one of the strongest of the northern trading-posts, was built near where Churchill's grain elevator now stands. Most of the Company traders stayed at the coast waiting for the Indians to come to them for trade. However, at times they sent men inland to try to win the redman's friendship. In this way young Henry Kelsey came to do the first exploring of the land which is now Manitoba.

To Henry Kelsey we owe the first story of a buffalo hunt, for he was the first white man to see it on the plains. He had been a homeless boy in London's crowded streets when the Company hired him. They brought him out to work at York Factory. He loved the outdoor life, and formed a real friendship with an Indian boy whom he called Tom Savage.

The two young adventurers travelled over many miles of what now is northern Manitoba. They walked almost two hundred miles through the Churchill River country without seeing a living thing but the wild musk-ox. Once they went south from York Factory with messages to New Severn. Their most adventurous journey was inland, all the way to the prairies.

In the spring of 1690, they joined a band of Indians who were returning home from York Factory, and travelled with them up the Hayes River. They crossed to the Saskatchewan River near its mouth and went south-west to the open prairie. There they saw the buffalo herds and a real Indian buffalo hunt! It must have been exciting to watch the Indians form a circle around a group of buffalo and close in on them, shooting them with bows and arrows. Afterward the two young men may have gone as far south as the district we know as Swan River; but they had to turn back. They had been away more than a year.

No one followed Kelsey's travels. When he was a grown man and had returned to England, the Company still kept their forts at the water's edge. During the many wars between England and France most of those forts were lost and won again, some of them several times. Then trade would go on as it had before. Each spring the Indians brought to the Bay canoes loaded with skins of bear and marten, fox and beaver. They filled the post storerooms to overflowing in return for knives, guns, kettles, mirrors, or bright-coloured cloth and beads.

THE LA VERENDRYES

It was not until eighty years after Kelsey's journeys that this system had to be changed. The need for a change came slowly. It was brought about by one man, one man with three sons and a nephew, who showed the way for others.

That man was Pierre de la Vérendrye.

The La Vérendrye family are famous in Canadian history for their work and their adventures in what is now Manitoba.

For twenty years Pierre de la Vérendrye and his family were the leading figures in the West. The Hudson's Bay Company had stayed close to their coastline. Henry Kelsey had travelled through the northern woodlands to the edge of the plains. The La Vérendryes travelled west by way of Lake Superior, as Radisson had first done.

They went farther than he did, building forts for the fur trade as they worked their way westward. They crossed by what was later called the Grand Portage, still marked by the ruins of an old fort just south of Fort William. On the shores of Rainy Lake they built Fort St. Pierre. At the Lake of the Woods they built Fort St. Charles. They paddled down the rushing Winnipeg River, and at its mouth built Fort Maurepas. As soon as he went west of the Grand Portage, La Vérendrye had trouble with his voyageurs, for they were then travelling on waters that flowed away from home instead of towards it. They were restless and uneasy. Then his nephew died; and his oldest son, on his way with twenty other men to get supplies, was massacred by Indians. In spite of his worries, his deep sorrow, and the plotting of jealous men at home, La Vérendrye went on.

He and his party travelled hundreds of miles by canoe and on foot through lands never before seen by white men. From Fort Maurepas they turned south on Lake Winnipeg. They found the Red and Assiniboine Rivers, and at the "Forks" of the two rivers they built Fort Rouge. Near the present city of Portage la Prairie, they built Fort la Reine, from which they went to visit the Mandan Indians to the south. Along an old Indian trail which led north from Fort la Reine across Lakes Manitoba and Winnipegosis, they built Fort Dauphin and Fort Bourbon; and, farther

north, on the Saskatchewan River, they also built Fort Paskoyac.

Kelsey had explored the northern prairie region; the La Vérendryes travelled over a good deal of the south and western sections of the province. Part of the Red and Assiniboine River valleys, part of the lakes, and even many miles of the mighty Saskatchewan River were all explored by either La Vérendrye or his sons.

The travels of the La Vérendryes, which ended unhappily in the death of the father, marked the way for many others to follow. In the years ahead, men from France, from Britain, from the settlements along the St. Lawrence River, came seeking wealth and adventure in the fur trade. They returned home laden with rich furs for the markets of Europe and with stirring tales to tell in the long evenings before a crackling fire. Amazing tales they told: tales of lean Indians who rode as if they were part of their half-wild ponies, of great herds of buffalo so thick they looked like a moving sea of animals, and of miles and miles of flat prairie like nothing they had seen before.

The white men's plans were for an endless chain of forts along the main rivers, rough but strong, and surrounded by high walls of stakes. Lonely trading-posts they were, in a great wilderness of forest and plain. The men of the English company had stayed close to Hudson Bay. These men, who followed in the footsteps of the La Vérendryes, went deep into the unknown land in search of furs.

SMALL FREIGHT CANOE

In the beginning, these traders from east of the Great Lakes were all French; but, after the British took over the settlements of the St. Lawrence River valley, there were many British traders, too, from Montreal. In a few years they decided it would be better to work together. They formed a company known as the North West Company. They brought their supplies and trading goods by canoe from Montreal to Fort William where the members used to meet once a year. The men who led the fleets of canoes, or the "brigades", as they were called, into the West for furs, were known as the "wintering" partners of the company. Those who lived in Montreal were the partners who bought supplies and sold the furs.

Soon the new company was strong enough to take a good deal of the trade away from the older company. The Hudson's Bay traders found that they had to leave their forts on the water's edge and start building forts inland, too, if they wanted to get any furs. In 1774 Samuel Hearne built Cumberland House near the mouth of the Saskatchewan, one of the most important rivers for trade. That was the first of a long chain of forts belonging to the Hudson's Bay Company. Soon in many of the best trading spots—places where two rivers met or at lake or river crossings—there were two forts, one for each company. The real struggle for furs had begun.

Both British and Canadian companies tried hard to win the Indians' friendship. Sometimes the Indians were unfairly treated. Certainly when the white men were excited

about a chance to make a good trade, they tried all kinds of tricks to get the best furs ahead of their rivals from the other company. The men from Hudson Bay had a great advantage because they got their supplies more cheaply and could afford to pay more for what they bought. Yet the men from Montreal knew the ways of the Indians better than their rivals, and went far inland to meet them.

Much of the West was explored by eager young men searching for new land from which to get furs. For the Hudson's Bay Company, Samuel Hearne crossed northern Manitoba several times in his efforts to reach the Coppermine River and to find the copper of which the Indians talked. For the North Westers, David Thompson surveyed the prairie section of Canada's southern border to learn which of his company's posts would have to be given up because they were in the United States. Both Thompson and his fellow workers, Alexander Mackenzie and Simon Fraser, travelled far to the westward. They even ventured by different routes across the terrible Rockies to the very shores of the Pacific Ocean. Often they followed rivers that rushed through deep canyons and boiled over jagged rocks.

Yet they pushed on. There was always the call of adventure for themselves and the chance of greater riches for the traders following behind. The fortunes to be made were large. Furs, bought for so little at the western posts, could be sold for millions of dollars in Montreal, Paris, or London. The North-West was a fur trader's heaven.

Then the settlers came.

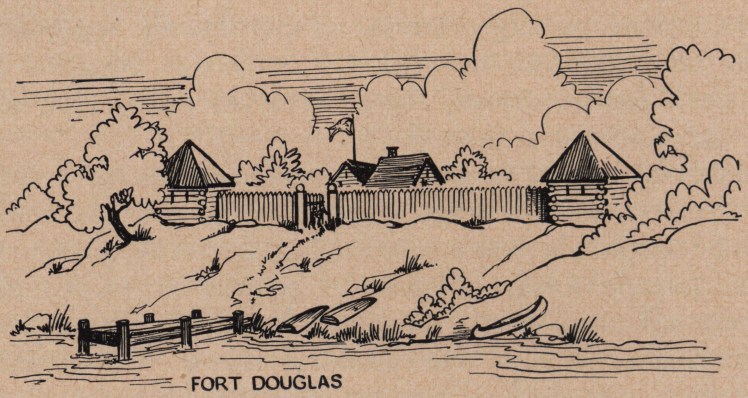
Even in the time of the fur traders it was known that the western soil was fertile. Outside the North West Company posts, some of the traders in their spare time took to gardening. Their gardens were good. They raised cucumbers, melons, parsnips, turnips, all the common vegetables. One early gardener reported 420 bushels of potatoes, an onion 22 inches around, and a carrot 18 inches long and 14 inches around at the top.

In time, the great fertility of the prairie soil became known back in the "Old Country". A young Scottish nobleman, Lord Selkirk, who was anxious to help his starving countrymen, brought several shiploads of settlers out to this still almost unknown West. When they heard of his plan, older men laughed at him and called his idea a "hare-brained scheme". Yet Selkirk kept on until he got the land he wanted south of Lake Winnipeg. Then he invited all men and women of courage to join his party on its way to the wilds of America.

They came to the Red River Valley in four different groups. The first group of 106 people, with Miles Macdonnell as their leader, landed at York Factory in 1811; stayed over the winter; and moved inland in the summer of the next year. Others followed in 1812, 1814, and 1815. The difficulties they had to face and the hardships they suffered would have beaten people who had less courage and less determination.

Neither trading company would give much help. The first party found that the small boats to be used for their

trip to the Red River had been taken back to the "Old Country". The men of York Factory would give them no shelter and few supplies. When they did reach the Red River, they found no help there either. With their poor tools they found it hard to build shelters for themselves and prepare the ground for planting their seed.



FORT DOUGLAS

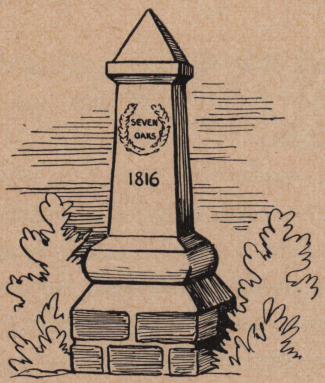
Miles Macdonnell chose a small point of land in a bend of the Red River a mile north of the Assiniboine, the one now called Point Douglas in Winnipeg. There they built Fort Douglas, but the party had to spend the winter in a camp sixty miles south which they named Fort Daer. Fort Daer was to see the settlers during many winters to come. To get shelter and food these early pioneers moved there close to the Pembina Hills each autumn. It was not so bitterly cold as on the open prairie. Also, the settlers learned from the Métis, or half-breeds, to make *pemmican* for food from the meat of buffalo which they could kill near by.

The second party of settlers came all the way to Red River in one summer, but the third party found even less kindness at Hudson Bay than had the first. They were put ashore at Fort Prince of Wales where they spent a hard winter. The next spring, in bitter cold, they had to walk 150 miles along the shore to York Factory before they could get boats to take them the 750 miles inland to the little settlement. They arrived in June to help the others with their building and planting. Again they all went to Pembina to live on pemmican and save their precious grain. Coming back with new hope in the spring, they once more set out their crops, working tiny fields with spades and hoes—the only tools they had. It was back-breaking work, but since they had several good log houses built, they felt they were lucky indeed.

As if their other hardships were not enough, the little band of settlers soon learned they had neighbours who were enemies. The Hudson's Bay Company men did nothing to help them; but the North Westers, believing that this new settlement would spoil their trade, hated them. Governor Macdonnell had given orders to send no pemmican from Red River for a year. He collected what was made for the North Westers and kept it for his own hungry people, giving some to the men of the Hudson's Bay post near by. Now, the North Westers usually supplied all their western posts with pemmican made at Red River, and they needed all the pemmican they could get. In June they took their revenge on the settlers by burning the new log homes to the ground. Governor Macdonnell was arrested and taken to Fort William along with 140 settlers who had been persuaded to go to Upper Canada to live. The few remaining

settlers left for Lake Winnipeg to escape further trouble. One settler alone was left. He tended the small crops and prayed for help.

In the fall it came. A new governor, Robert Semple, arrived in November with the fourth party of settlers. Even before he arrived, Colin Robertson and twenty men from Montreal came, bringing the few settlers back from Lake Winnipeg. At the meeting of the old settlers and the new, there was great rejoicing. Even after the disastrous fire there was a good harvest from the crops that had been saved. There would be seed for the next year and there were plenty of buffalo. Happily they all journeyed to Pembina for another winter.

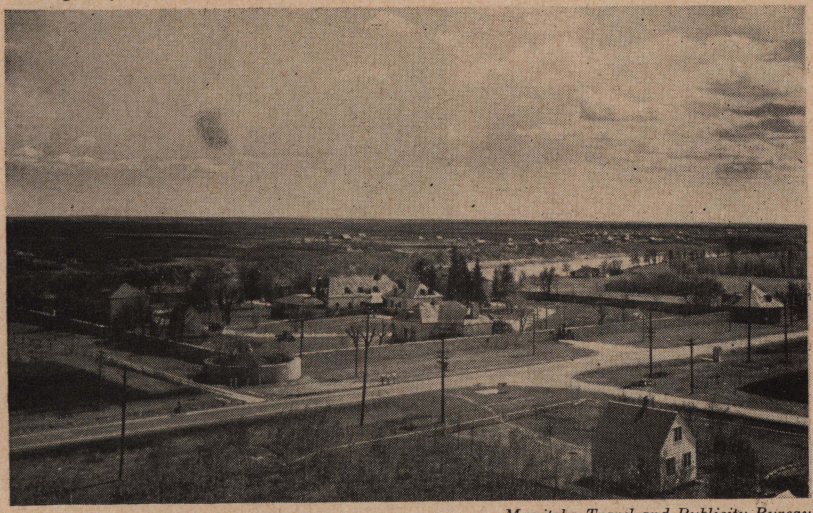


SEVEN OAKS MONUMENT
NORTH MAIN ST., WINNIPEG, MANITOBA

The following summer came the worst blow of all, the Massacre of Seven Oaks. Four years before, the North Westers had seen themselves winning the race with the Hudson's Bay men for furs. Now they were seeing this settlement becoming stronger in spite of what they had already done to destroy it. In the spring of 1816 they sent a group of their Métis, under the leadership of Cuthbert Grant, to attack Fort Douglas. Governor Semple went out to meet them. A shot was fired. That was all that was needed to start the attack. Governor Semple and twenty-one men were killed almost within sight of the fort they tried

to protect. A second time the settlers had to leave for Lake Winnipeg. When they heard the news, the North Westers cheered.

This time Lord Selkirk himself came to the rescue. At the time of the massacre he was on his way west with a company of Swiss soldiers, the De Meurons. When he



Manitoba Travel and Publicity Bureau

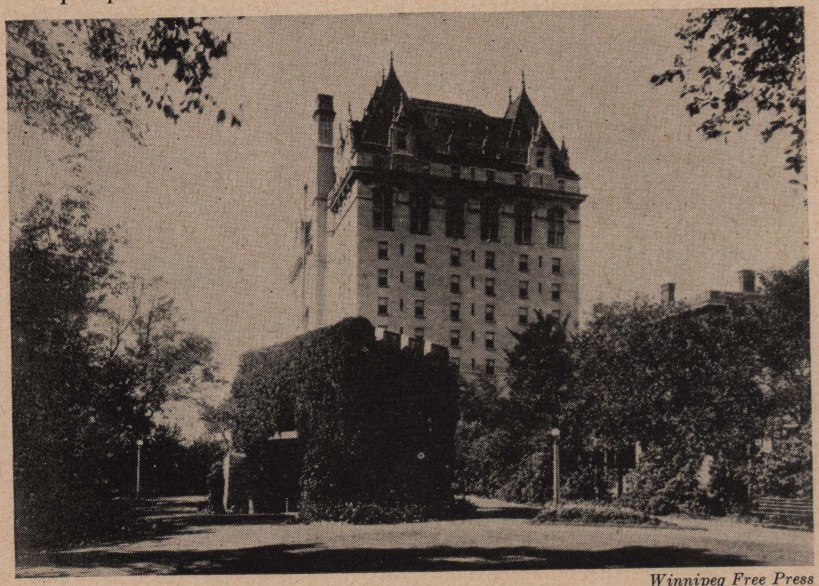
Lower Fort Garry

Twenty miles from Winnipeg—the only fort that remains complete

heard the terrible news he went straight to Fort William, the main North West Company post, and captured it. He set Miles Macdonnell free and sent him ahead during the winter to take back Fort Daer and Fort Douglas. The men travelled on snowshoes to get to Red River. By spring all was peaceful and the settlers were back once more. Lord Selkirk arrived to help with the crops and farms. He laid out lands for a church and a school as well. That was a happy summer for everyone but the North Westers. Lord

Selkirk even won the friendship of the Indians who nicknamed him "the Silver Chief".

That year and the next gave good harvests. Then suddenly a plague of grasshoppers for two years ate up what grain the people had worked so hard to save. The little band



Winnipeg Free Press

Old Fort Garry Gate

The ivy-covered gate is all that remains of the fort

had to begin again with grain they brought from the United States. Still they were working with hoes and spades. It was not until five years later that they had ploughs to help them. Slowly they rebuilt their homes and worked to make larger fields. Suddenly they had word that their protector, Lord Selkirk, had died in France. Trouble seemed to come from all directions. Then strength came from an unexpected place.

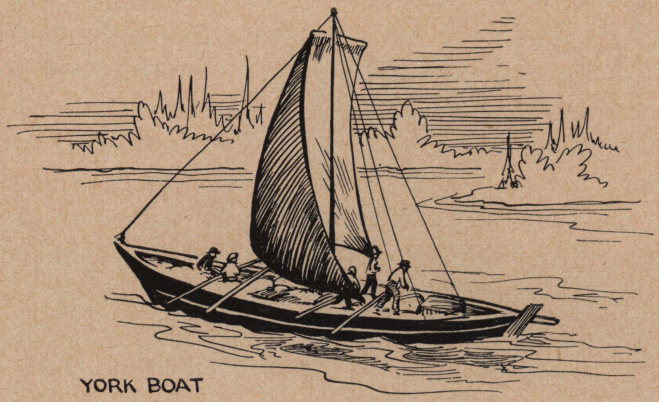
END OF COMPANIES' RIVALRY

In 1821 the two fur-trading companies gave up their mad race and joined hands. The Hudson's Bay Company took over all the western fur trade. From then on, the yearly meeting was to be held at Norway House, north of Lake Winnipeg. With the two companies joined, there was no need to keep all the posts open. Many were closed and the men who would rather stay in the West than go elsewhere came to live at Red River. Many Métis families came to live there, too, now that the men were no longer needed to paddle the swift North West Company canoes on the long journey to Fort William. The settlement grew quickly from about three hundred to fifteen hundred people. It took on new life.

For the next fifty years the settlement at Red River steadily grew stronger, in spite of two terrible floods which did their best to sweep everything from the valley. Norway House became the main post for delivering supplies to the Company's western forts. Fort Garry, a new post at the "Forks" of the Red and Assiniboine Rivers, became the headquarters of the Company's manager or *governor*. Some time after Lord Selkirk's death, the Company bought back the land it had once granted to Lord Selkirk. After that the people of Red River were in the care of the Company's governor and a group of Company men called a *council*.

The settlers soon found that they were being governed by men who were more interested in furs than in settlers. The Company ship brought their supplies once a year. The settlers could receive or send mail twice a year—in

summer, by water through York Factory; and in winter, overland through Montreal. Most of their business was trade among themselves; the rest was buying at the Company stores at Fort Garry. They were not allowed to do any trading in furs. The Métis, who made their homes



YORK BOAT

across the river, earned a living by becoming hunters. Later they worked on the York Boats for the Hudson's Bay Company as they had once paddled the canoes of the North Westers. Neither settlers nor Métis had any trouble so long as they did nothing to interfere with the Company's main business—the fur trade.

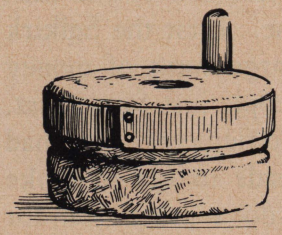
As time went on, the people of Red River found more and more that they wanted greater freedom and closer connections with the rest of the world. But that was not until later. For a long time the settlers were fully occupied with making a living. They lived in a settlement that for many years was like a very small island in a very large sea.

Because they were cut off from the rest of the world, the people of Red River could buy very little. They could sell nothing except the food which they could sell to the men of the Company. No one was to blame. First the Selkirk family and later the Company spent large sums of money trying to help the little colony. The people just found that, because they lived so far from other settlements, they had to depend on their own hands and heads to get or make what they needed. They learned to do a great deal for themselves.

Homes and food were the most important problems. The women worked beside the men to get these. The first homes were small, one- or two-room cabins made with logs and with their cracks packed with clay. The roofs were thatched and the floors were of earth tramped down. Until the men could get glass, they covered the windows with thin parchment. As there were no stoves, the women did their cooking at an open fireplace which was made of clay baked hard.

Later the houses were larger, with stone foundations, shingled roofs, plastered walls and windows of glass. Those changes came one at a time. Nails and all kinds of iron were scarce. Yet fences and barns were built, too, and farm tools and furniture were made almost without metal. By 1830 the powder storeroom at Fort Garry was built of stone. After that there were a good many buildings made of stone. Several of these can be seen standing yet.

Food at first was chiefly pemmican, with wild fruit and fish when the people could get them. Even though the first farms had only small fields worked with spades and hoes, the crops were good. Yet, rather than use their grain for food until they had a good store of seed, the settlers saved it and went without bread. Later, grain was ground by hand with a "quern". The "quern" was two flat stones with a handle fastened to the top one so that it could be turned to grind the grain. The flour made with it was not as fine as modern flour. To get even a small amount of flour a good deal of work was needed.



A QUERN

Indeed, all the work of raising grain was difficult and slow. Even after the coming of ploughs, seeding still had to be done by hand for a while. Cutting was done with a *scythe*, a long curved knife on a strong handle. While the men used scythes, the women worked beside them using smaller scythes called *sickles*. The grain stalks were tied in bundles by hand, using either willows from the river banks nearby or, more often, stalks of the grain itself in place of string. To get the grain out of the head, the stalks were beaten with *flails* as in the old Bible days.

Salt was scarce and sugar almost unheard of, although the people did get some molasses. Because there was little salt and, of course, no ice except in winter, meat had to be dried and smoked to keep it. Thus pemmican, made at first from buffalo meat and later from the meat of cattle, was a common food even in later days.

For clothes the settlers had again to depend on their own hands and heads. A plan to start a company to make shawls from buffalo wool for sale in the "Old Country" failed; but the company lasted long enough to show that clothes could be made from buffalo wool. Later Governor George Simpson, who was good to the settlers in many ways, sent for sheep from the United States. In the meantime, he had also brought out a teacher to show the women how to spin. Soon everyone was wearing clothes made of home-made cloth or *homespun*.

Sheep shearing time came in June, but it took many months of work before the wool became cloth for dresses, shirts, and coats. The whole family, even small children, had some share in washing and carding the wool ready for spinning and weaving. Mothers, already busy with all their other work, had to find time somewhere to make shoes, too. From father down to baby, everyone in the early days wore either moccasins or shoes of home-made leather. Ox or buffalo hides were tanned with willow bark in a wooden tub to make the leather. Thread was made by pulling fibres off the heavy back muscles of the buffalo.

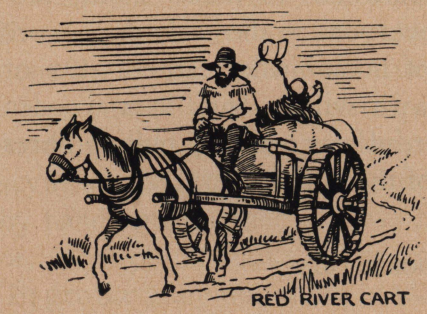
TRANSPORTATION

Finding a way to travel was the work of the men of the family. At first there was no way to travel at all but on "shank's mare". Everyone used his or her own two feet. Although the Indians had ponies, the settlers for some years had none. Like the explorers and fur traders, they had to find a way to travel by water. For them the birchbark canoe of the North Westers was too frail and difficult to

handle. The wooden York boat used by the Hudson's Bay Company was too heavy and awkward. They cut logs, hollowed them out, and trimmed the ends to the shape of a boat's bow. This *dugout canoe* served them quite well.

On land for a while they had no vehicle. Then, after the two trading companies were joined, many of the North West Company men who came to live at Red River became hunters. Some of these men had money and horses. If they were to hunt buffalo and carry meat, they needed wagons of some sort. There was no iron but there was wood and they had the tools. They made the now famous Red River carts.

The Red River cart was two large wooden wheels on an axle, with a light box frame set on the axle between the wheels. The whole cart was held together without a single nail or scrap of iron. Wooden pegs and strips of rough hide called "shagganappi" were all they used. These carts were for many years the only kind of wagon in the Red River district. They were used to carry meat from the buffalo hunts, and Company supplies from Fort Garry, across the prairies to Edmonton. Later as many as fifteen hundred of these carts were kept busy all summer on the trail between the village of Winnipeg, just outside Fort Garry, and St. Paul, in the United States. It was the use of Red River carts to smuggle furs across the southern border that brought


RED RIVER CART

the only real struggle between the men of the settlement and the Company.

The people of Red River were short of money because they could sell very little. They needed to trade to get what they wanted. For many years there was nowhere for them to trade but among themselves or with the Company. Then new settlers in the United States started to come farther west until they were close enough for drivers to reach them from Red River. A monthly mail service was started. Even the Hudson's Bay Company began bringing its supplies through the United States by way of Chicago and St. Paul. Some adventurous traders began to go to St. Paul with furs and bring back goods. The Company tried its best to stop them, but failed.

NEIGHBOURS TO THE SOUTH

With the opening of the trail to St. Paul, the people of Red River were no longer cut off from the rest of the world. Mail was coming and going. Supplies were coming in, and so were people. A small group of Canadians arrived. Two men from Toronto started a newspaper and soon they were asking through their paper for union with Upper and Lower Canada in the East. Other people thought that the Red River Settlement should join the United States. Still others thought it should remain by itself, a separate colony under the British flag.

For almost all its life the settlement had been a separate colony under the flag of the British company from Hudson Bay. With the new road open to St. Paul, it seemed for a while that it would join the United States. It was not long,

however, before another road was opened from the East. Across the rough, rocky, unsettled country which the La Vérendryes had crossed to lead men into the great North-West Canada reached out to win the West for herself.

THE RED RIVER REBELLION

On July 1, 1867, the Dominion of Canada was born. Until that time the country that is now Eastern Canada had been only scattered settlements. In the new Dominion of Canada the growing settlements along the St. Lawrence River became the provinces of Quebec and Ontario. The settlements along the coast of the Atlantic Ocean became the provinces of Nova Scotia and New Brunswick. In the beginning Canada had only four provinces. She was young and small, but she wanted to grow. One of the dearest wishes of her leaders was to own the great North-West.

Because the Hudson's Bay Company was British, the men who led the new Canada had asked the government of Britain, even before this, about taking over the West. The Hudson's Bay Company agreed to hand over its right of government and to become an ordinary trading company. Canada was to pay one and a half million dollars and let the Company keep part of the land, especially around its trading posts. The change was agreed upon and Canada was happy. She would own her great North-West.

So she thought, but the people of Red River had something to say first. The Canadians and the Company were trying to transfer the West from one to the other without a word to the people living there. By this time there were about twelve thousand people living in the colony. Fifteen

hundred were white and five hundred were Indians. Nearly ten thousand were Métis, of whom more than half spoke French. The others spoke English. It was really the French-speaking Métis who acted for the people in the West. They acted, not so much because they did not want to join Canada, as because they did not like the way the change was being made. The people of Red River did not like being *forced* to join Canada. They wanted first to make sure that their land was to belong to them and that their rights as citizens of the new Canada would be safe.

There might not have been any real trouble at all if the Canadians had not made two mistakes. First, without explaining what they were doing, they sent out men to survey a road from Lake Superior to Red River, and others to survey the prairie land for farms. The survey men sent with Colonel Dennis were to divide the land into sections a mile square, leaving spaces for roads between the sections. Now, ever since the people had first come to Red River, their farms had been laid out in long strips facing the river. These strips were narrow along the river but they stretched for two miles back on the prairie. If the land was to be divided into squares, it would be difficult to be fair about farms already laid out in strips. The people who owned farms, especially the Métis, were alarmed about this; and the Canadians did not take the trouble to explain that the old farms would not be disturbed. A young man named Louis Riel, with some of his friends, went out and stood on the survey chain so that the surveyors could not work.

The second mistake the Canadians made was to choose a man named William McDougall to be leader of the council that was to rule in their new western land. The Métis

did not like him because he was the man who had sent the surveyors. The Company men did not like him because for several years, in Canada, he had been talking against the Hudson's Bay Company. William McDougall was proud to be chosen to come to Red River, and he set out to come through the United States. He was hurt and angry when he arrived at Pembina to find a message from Red River telling him not to come any farther. When he tried to go on, he was met about twelve miles south of Fort Garry by fifty armed Métis who, quietly but firmly, escorted him back to Pembina. William McDougall did not get to Red River.

Meanwhile young Louis Riel was a busy man. He and his Métis followers took over Fort Garry and put the editor of the paper, *The Nor'Wester*, into jail. Riel invited the people of each district in Red River to send men to a general meeting or *convention*. He started a newspaper of his own called *The New Nation* and he and his helpers wrote out what they called a "Bill of Rights". The "Bill of Rights" explained in writing what the people of Red River wanted from their new government. Then Riel seized all the ammunition and collected the government supplies. To do this he took prisoner several Canadians who were guarding the supplies. They were locked up in Fort Garry.

The Canadian Government began to see that they had made mistakes. They sent a very sensible man named Donald Smith to try to straighten matters out and keep the peace. Mr. Smith, also, was shut up in Fort Garry, but he was allowed to have visitors. After careful planning, he managed to persuade Riel to call a meeting of all the people. He wanted to explain why he was in Red River and to get the people to decide what was to be done. That meeting

lasted two days in the open air in the middle of January, but it ended with everyone in better humour. There was much cheering, and Louis Riel was made president of a special government until an agreement could be made with Canada.

Riel agreed to let his prisoners go free, but he did not let all of them go. Until this time he had been very reasonable. Now people began to distrust him. Then he did an unforgivable thing—something which made Louis Riel almost an outlaw for the rest of his life.

Among the first prisoners Riel had taken was a young man named Thomas Scott. When Scott was set free he had gone to Portage la Prairie which since 1849 had grown to be a small village. He came back to Red River with a party of armed men who intended to help force Riel to set free his other prisoners. They did what they came to do, but, as the Portage men were passing Fort Garry on their way home again, Riel arrested some of them. In that group Scott was taken prisoner a second time. Whether Riel was trying to show his power is not known, but he gave Scott a very unfair trial and sentenced him to death.

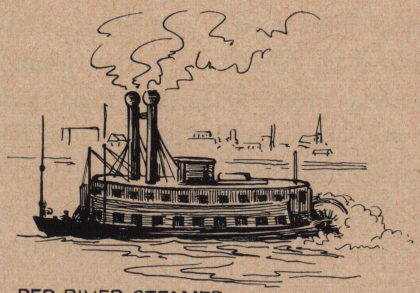
At noon the following day, Thomas Scott was shot by a firing squad.

MANITOBA JOINS CONFEDERATION

The people of Red River were horrified, and the Canadians were furious when they heard what had happened. Archbishop Taché, one of the leading men of the settlement, had just returned from Rome. He used all his influence to stop any further bloodshed and to bring peace. Another

meeting was called. Men were chosen to visit Ottawa and talk with the Canadian leaders. Donald Smith returned to the East as well. By May 12, 1870, an agreement was made. Two months later, to the young Dominion of Canada was added the new province of Manitoba.

Riel was still at Fort Garry. He planned to carry on his government, but even his Métis friends deserted him. When he heard news of the talks at Ottawa and the plans for the new province, he raised the Union Jack over the fort. Meanwhile, a company of soldiers under the leadership of Colonel Wolseley had set out for the West. When they reached Fort Garry, they found that Louis Riel had crossed the river on his way to the border. For many years he lived in the United States. When he did come back to Canada, it was to lead a rebellion in Saskatchewan.



RED RIVER STEAMER

This struggle between Canada and the Métis of Red River is known as the Riel Rebellion. To it and its leader the people of Manitoba owe a good deal. Though for a long time it brought trouble and hard feeling, yet it also brought to the people of the West their first prairie province with its own free government.

There was much work for that government to do in the years just ahead, making laws and laying plans to care for the needs of the people of the province. Once the West had made connections with the outside world, thousands of

settlers from Eastern Canada, from the United States, from Britain, and from Europe, came pouring in. First by river steamer, by stage coach, and by train from the south, and later by train from Eastern Canada, they came rushing to get a share of the riches of the new Canadian West.

Those first tiny farms along the river banks quickly spread out and became larger. By 1878 the first settlement as far west as the present city of Brandon was begun. Then, in 1881, the Canadian Pacific Railway reached Winnipeg. Swiftly it stretched out across the prairie. Along with the railways, and even ahead of the railways, the new settlers moved out to find farms and start new towns every few miles through the south and west.

The small, square, "postage-stamp province", as Manitoba used to be called, was twice made larger before it reached the size it is now. Its leaders encouraged the building of other railways, opened new, free schools for the boys and girls, and in many other ways tried to make life for these many new people easier and better.

With the coming of such a flood of settlers, the old fur trading days disappeared. Still beyond the edges of the farm lands lie miles of rough rock and forest where the trapper gets his furs; but in the south of the province nearly all furs are now produced on fur farms. Manitoba, like Canada's other provinces, now has fine homes, paved streets, broad highways, telephones, electric lights, and aeroplanes. Beside the fur farmers and trappers are grain farmers, fishermen, lumbermen, miners, and the manufacturers, office workers, and railway men who work with them. To-day almost 760,000 people make their homes in Manitoba.

A Duck's Eye View

LAND . . . SOIL . . . VEGETATION . . . WATERWAYS . . . RESOURCES

NO ONE really knows Manitoba who has not heard the ringing "Honk! Honk!" of the Canada geese, blue geese, and snow geese, or watched the long, trailing flocks of mallard and canvas-back ducks going north to their summer feeding-grounds in the spring.

Each year they fly over Manitoba's grain fields, her broad forests, her many lakes and rivers, over her power houses and her mining towns. Each year they see far below them as they travel, the light greens of the southern grasslands laid out like a giant checkerboard of new, green crops and rich, black earth. They fly high here, for the country is lined by a network of roads and railways linking busy towns and cities. Most of the people of Manitoba live in the south and west of the province. For ducks and geese there are too many people there. They fly on up to their quiet and friendly Northland.

To the rough, unsettled land they go, north and eastward. There they find a seemingly endless stretch of rock and lake and muskeg sloping down to the cold, gray waters of Hudson Bay. The geese on their way to their summer nests in the far North pass over Manitoba's only seaport, Churchill, where the edge of the Arctic barren lands reaches down along the shore of the Bay. But the ducks do not

follow. They come to rest farther south. Between northern barren lands and southern prairies, stretches mile after mile of forest. Spruce, birch, balsam, poplar, and jackpine reach high and straight to the clear sunlight, their roots planted firmly in the rocky soil.

Trans-Canada Airlines

Air View of Manitoba Farm Lands

The sheltered forest floor provides a home for many different creatures of the wild. It is cut through in many places by chains of rivers and small lakes, some of them without even a name. On these quiet lakes and in the marshes where reeds and wild rice grow, thousands of ducks spend the summer raising their young.

Here they can live undisturbed, almost as quietly as *before the white man came. Although parts of this forest* land have become the home of men, hundreds of miles are still their own. Most people think of Manitoba as a prairie province, perhaps because most of its people do live on the prairie lands where they have their farms. Yet really only

Manitoba Department of Agriculture

A typical scene on Black River, east of Winnipeg

one quarter of Manitoba's 219,723 square miles of land is good grassland. The best of that is along the broad river valleys. The rest of the good soil lies along the western border on the edge of the great Saskatchewan plains and up a steppe in the prairie made by a long ridge of high hills.

The Porcupine Mountains, the Duck Mountains, the Riding Mountains, the Turtle Mountains, and the Pembina Hills—these are their names. They are not mountains like the Rockies, but they are the highest points in Manitoba. They are quite steep on the east side in places, and slope

more gradually on the west. They lie in a slightly curving line like a great wrinkle on the face of the old earth. To the east of them are Manitoba's three largest lakes: Lake Winnipeg, Lake Winnipegosis, and Lake Manitoba.

Into these lakes flows the water from almost half of Western Canada through the Saskatchewan River, the Red and Assiniboine Rivers, and the Winnipeg. In these large lakes it is collected before it is emptied into Hudson Bay down the great, rushing Nelson River. Manitoba is lucky in her network of lakes and rivers, for they have served her well. The Nelson, the Churchill River to the north, and especially the Hayes River to the south, became the first highways of travel inland from the Bay. Farther south, the Winnipeg River was the West's main route of travel to the East before the railway came.

It was these waterways that made it possible for early fur traders to reach the riches of this province. It was along the rivers that trading-posts appeared, like the coffee houses at highway corners to-day. From these posts men travelled near and far gathering in the wealth they were so eager to find. At first only furs were wanted. Later men came seeking good soil to grow food, lakes in which to catch fish, forests for lumber and paper, then mineral rock for copper, zinc, silver, and gold.

Manitoba is rich in these *natural resources:* good soil, many small lakes, miles of forest, great stores of minerals, and water power to lighten and aid men's work. With this wealth of material, the people of Manitoba do their part in building Canada's future and in helping their neighbours everywhere.

Climate and the Weatherman

MANITOBANS live in what is often called a *continental climate* because it is found at the centre of a continent. Instead of the mild weather of Canada's coastlands, the Manitoba weatherman reports cold winters and warm or hot summers. His July and August records will show 90 to 95 or even 100 degrees above zero. His winter records may sometimes show a drop down to 35 or 40 degrees below zero.

Large bodies of water, such as the Atlantic or Pacific Oceans, bring warmer winters and cooler summers for people who live near the water. Manitoba is without this advantage. Even Hudson Bay, large as it is, does not help to bring mild weather. It lies to the north-east, while most of Manitoba's winds are from the west.

Frost comes early and stays late. Sometimes early in September it gives flowers and late crops a nip. In the spring it may linger into early June to catch tender shoots in the northern farming districts. Snow lies on the ground from November to March. The winter climate is frosty enough to keep snow crisp and sparkling.

Ice on the northern lakes makes winter fishing quite an adventure. It provides good roadways, too, for tractor trains carrying supplies to distant trappers and miners beyond the reach of railway lines. Some Manitoba mining towns depend on the winter ice across lakes and marshes to "hold" long enough for most of their year's supplies to be brought to them by tractor train. Trappers, too, depend

on the winter's crisp cold to make the furry creatures of the wild grow thick, warm coats.

The long winter was at one time a real enemy of the farmer, for it kept his spring seeding late and in the fall often froze his grain before it could ripen properly. New varieties of grain now have been developed to ripen in time for an early harvest. Frost is not the dangerous enemy it used to be.

Indeed, the summer months serve the farmer well, now that he has grain which will grow and ripen between the first week in May and the end of August. Clear, sunny weather brings the grain along quickly as if to make up for spring's late coming. Warm days with cool, refreshing nights are normal to Manitoba's summer climate. Even though the weatherman's thermometer may often go high, the "dry" heat of the prairies is not so hard on either man or animals as the "damp" heat of the St. Lawrence River Valley.

Rainfall in Manitoba is heavier than in Alberta but much lighter than at the West Coast or in Ontario and Quebec. In an ordinary year, most of the twenty inches of rainfall comes in April, May, and June, just when it is needed most for crops and gardens. The scattered showers through the later summer months are refreshing after the heat. West winds from across the prairies bring clear, warm air to make the rest of the summer days bright and sunny. From July to October, and often in May and June as well, the weeks are crowded with days of rich, warm sunlight.

It is said that crisp, frosty air in winter and clear, sunny days in summer give Manitobans their great energy. Perhaps this is true.

The Melting Pot

THE story was once told of a wonderful melting pot into which were poured all kinds of metals—gold, iron, silver, copper, and many more. These were mixed and melted until they blended into one very valuable metal. That new metal was very precious because it was made of the best from each of the metals put in at the start.

Manitoba, like the rest of Canada's family of provinces, is like this magic melting pot. She has people from many different countries working, playing, or going to school together, all learning to be good Canadians. Like the metals of the old story, each group brings its own special gifts to be blended with the gifts of others. If we could but follow on a magic carpet the lives of all these people, what a wonderful collection of true adventure stories we would have!

THE METIS

Such a collection would tell first of the Métis, the families of French and Scottish fur traders who married Indian girls at the early trading-posts. The Métis families grew up along the rivers to become great hunters and skilful canoe men. They were the famous voyageurs of the West, rugged and daring. They carried rich cargoes of furs down rushing rivers in light birchbark canoes, chanting their

strange songs to the swing of their paddles. Day after day they sent their precious burdens shooting ahead across cool, deep waters or over boiling rapids where one careless moment might bring death.

It was the Métis who held the great Red River buffalo hunts where every man had to ride like the wind and shoot with a steady hand and a sure eye. They first hunted the big herds by driving them into a trap or by wrapping themselves in buffalo robes and creeping up on them. Later, they generally rode by the side of the herd as it stampeded across the prairie, picking off the animals they wanted for making their famous pemmican. The Métis knew how to organize the buffalo hunt. They made every man follow the chosen leader and respect the rights of his neighbours. When the West was given over by the Hudson's Bay Company to Canada without even a word to the settlers, it was the Métis under Louis Riel, who saw to it that this country became a province with the rights of her people properly protected.

THE SELKIRK SETTLERS

The early stories, too, would tell about the Scottish pioneers. Driven from their homes in the old land, they came, with Selkirk's help, to start homes in the new. These were the men, women, and children who travelled 750 miles in open boats from Hudson Bay to the "Forks" of the Red and Assiniboine. When they found no help there, they started to work for themselves, and later walked another sixty miles to spend the winter at Fort Daer near the shelter of the Pembina Hills.

If the Métis brought strength and daring, these hardy pioneers brought courage and determination. For six years they planted crops, and for six years they saw them destroyed by drought, hail, or grasshoppers. Twice they were forced to leave their homes after attacks from the North Westers, and twice they had to race rising flood waters to higher ground. In 1816 their governor and twenty-one men were massacred within sight of their homes. Yet, in spite of terrible disappointments, in spite of the danger of starvation, and death, they managed to live on. They bought new seed and new cattle and started over again. They were the men and women who built Manitoba's first schools and churches, and who organized the first western community.

THE MENNONITES

The third story would be that of the Mennonites, the six thousand men and women who came from Russia to find new homes and freedom in young Canada. If the Métis and Selkirk settlers started the province of Manitoba, the Mennonites showed how to develop it. Strong men, with the knowledge and skill needed for this country, they soon showed that farming could be done beyond the settlements on the wooded river banks. Where others had stayed close to the rivers, the Mennonites settled on the open prairie. Within two years, large sections of unbroken grasslands became fields of waving grain.

These people had grown up on the rich plains of southern Russia and knew prairie life from the old land. Farm after farm, village after village they set up, working hard and long. At first they lived in little villages, going out from

there to work on the land which belonged to all the people in each village. This was what they had done in Russia. Soon they began to change to the Canadian way, where each family owned a farm. Before long they were building good homes, and their broad fields were showing others that this open, treeless prairie would grow fine crops. They were the first in the province to put wild fruit trees in their gardens and to grow the flax which has now become one of Manitoba's most valuable crops. In the last few years, they have developed fine modern communities. Winkler and Steinbach are two of Manitoba's finest and busiest towns.

THE ICELANDERS

Almost at the same time came another group, the Icelanders, who met many disappointments before they finally found their way to Manitoba. These people, like the Mennonites, came by train and boat from the south, down the Red River to Winnipeg. Carrying their few supplies with them, they travelled through rain and snow, heat and cold. Although there was much better land, they chose to live on the rough shores of Lake Winnipeg because there was forest for lumber, water for fishing, and plenty of land where they could all live in one settlement. There they had to fight against rocky soil, mosquitoes, and a terrible plague of smallpox. Yet they named their new town Gimli, or Paradise.

Some of those Icelandic pioneers found a living on the lake through a growing fishing industry. Many more moved to Selkirk, Argyle, Baldur, or Winnipeg. More than

any other group of "New Canadians", they have been quick to learn our language and our ways. With them they have brought their love of good homes, of books, and of a good community life. Three quarters of the Icelanders living in Canada have found homes in Manitoba. Every year they send sons and daughters into the public life of the province they are helping to build. Many of Manitoba's leading men and women are proud to call Gimli their old home.

THE CANADIANS

Once the Mennonites had shown what the prairies could do, others swiftly followed in their footsteps. Settlements began to spread out to the west, to the south-west, and later to the north-west. Men in the East had become interested in what was happening. Between 1880 and 1890, railways almost raced across the prairie, and those twin ribbons of steel brought thousands out to new homes in the West. The same railways that brought settlers west took grain east. Stories of western grain fields and of free land spread east to Canada, south to the United States, and even across the Atlantic to Britain and Europe. Still others came to join the settlers already in the province.

From the east came Canadians. Those who spoke French stayed generally on the east side of the Red River along roads leading out from St. Boniface, or started settlements in the south-centre of the province. By the hundreds they came from Quebec and from the factories of the eastern United States. They came to the villages of Ste Agathe, St. Jean Baptiste, Letellier, and many others. Most of those who spoke English came from Ontario. They spread

out across the south and south-west of the province to form towns such as Carman, Crystal City, Souris, and Deloraine. Portage la Prairie, which had been a village for twenty years, suddenly grew to a town of four thousand as the rich "Portage Plains" developed into fine farms.

Many of these "old" Canadians were the sons and daughters of the pioneers of the eastern provinces. They brought with them the spirit of the older part of Canada to help the new. They knew of the pioneering days on the edges of the older settlements along the St. Lawrence River or beside the Atlantic Ocean. They were willing to help with the building of the newer, younger West. Coming from parts of Canada where people had begun to get many comforts for their homes, these people were cheerfully starting again from the beginning. In doing so, they helped more than anything else to bind together the East and the West.

THE AMERICANS

Along with the Canadians came the Americans who flocked north to Canada where there was still free land after most of the western states were taken up in ranches or farms. Most of the Americans who came north along the Red River Valley and through Winnipeg went on west to Saskatchewan; but many did stay to live in Manitoba. These people were different from any of the others because they brought with them their experience on western American farms.

Many of them had sold farms in the South to move north to Canada. Even more than the eastern Canadians they

knew what life in the West would be, and they were prepared for it. Many of them brought with them furniture, tools, and farm implements that were very valuable in a new country. From the sale of their American farms they had money, too. The coming of the Americans meant more good tools, more money, and especially, more experienced pioneer men and women to help the Canadian West.

THE BRITISH SETTLERS

Meanwhile across the Atlantic the people of Britain had become interested in tales told of Canada. They, too, joined the streams of people on their way to the western plains. Neepawa, Minnedosa, Virden, Rapid City, Headingly—all these districts were built up by settlers from Britain who felt a desire to leave the old land and join their fortunes with those of others in the new Canada.

These people from the British Isles joined the Canadians in bringing to the West something of that spirit which helped to build the British Empire. Like the Icelanders, they came from their old homes on an island and suddenly found themselves at the heart of a large continent where there were few comforts. Many of the British people had a good education. Many had money enough to start well in Canada. Many had not, but brought with them, as the first settlers had done, a firm determination to make a home for themselves. Whatever their life had been before, they soon became part of their new community, either in town or country. With them they brought their love of good books and music, their spirit of good sportsmanship, and their deep desire to serve as best they could the nation in

which they were to live. The "old" Canadians have helped to bind Eastern and Western Canada. These people from Britain have helped toward an understanding of the "Old Country" to which Canadians owe so much.

THE UKRAINIANS

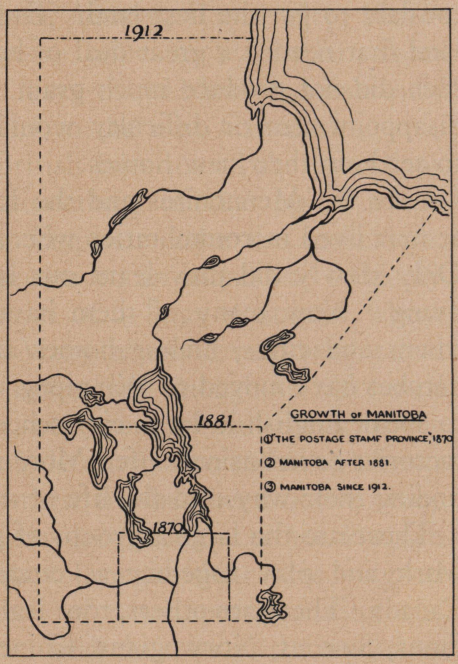
There is also the story of the twenty-one thousand Ukrainians who were the largest group of settlers to come to Manitoba, not knowing how to speak our English language. These people came from homes in central Europe, hoping to find room somewhere in the Canadian West for homes and perhaps small farms of their own. Unfortunately they came too late to get the best land. They had to set up farms on land that needed a great deal of hard work and which even then did not produce much grain. Yet, determined that no disappointment or difficulty would stop them, they started to settle in their new homes.

Like the Mennonites and the Icelanders, the Ukrainians at first lived in communities where they would be together. Only slowly did they learn our language and our ways of living. Now many of them have spread out to different towns and cities, finding homes and work there. A large number have moved to Winnipeg where their children learn to speak English in large city schools and later find work in factories or in business life. More and more these people are finding their way into the life of modern Manitoba.

These are the largest groups of people who have come to work and play together as citizens of Manitoba and of Canada. There are others, too: Italians, Germans, Hebrews, Finns, Swedes, Norwegians, Chinese, and Japanese. These

people did not come in large groups, nor did they come all at one time. They have found homes in many parts of the province, both in the town and in the country. Families speaking many different languages have followed the railway steel toward the setting sun and the young land where they hope their dreams may come true.

Like the early pioneers these people, too, brought their gifts to the melting pot. They brought their love of the land, their strength and courage, their art and their music, and the crafts and skills they had learned in their old homes. The streets of our cities and towns, the farms of the prairies, the mines, the offices, the factories, have all benefited from the work of people from many lands. On Manitoba playgrounds and in her schools are the boys and girls whose parents came from so many different countries. They work and play together as young Canadians. The whole life of Manitoba—her industry, her government, her literature, her art, her music—all show the gifts of these many people. By their own choice they came to Canada to live. Their love and loyalty is for the young nation that has given them a home.



The Romance of Fur

One bright morning in 1652, a boy of seventeen slipped silently past the sentry of a high-walled fort on the banks of the St. Lawrence and disappeared into the woods beyond. The fort was Three Rivers. The boy was Pierre Radisson. He intended to be away just one day hunting wild pigeons. He was gone two years, for he was captured by a wandering band of Iroquois and carried far from home.

By the time young Radisson returned he had such a love for life in the woods that he could not stay at home. He had lived with Indians, paddled and hunted with Indians, and learned Indian ways. For months at a time he would disappear, to return unexpectedly with a song in his heart and a tale of adventure on his lips. He was one of Canada's greatest *coureurs-de-bois*, her runners-of-the-woods.

It was this Pierre Radisson who first told the world about Manitoba's furs, about the great country of forests and lakes far to the west where furs were "as thick as blueberries". Almost three hundred years ago he was telling of the wealth and adventure to be found in the western fur business. Traders and trappers ever since have been proving that Radisson was right.

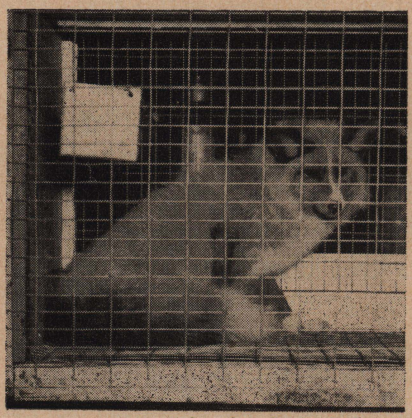
In the early days, the fur industry was a matter of trading with the Indians to get the finest furs. These furs were then sent by sailing ship from Hudson Bay to London, or by canoe up the Winnipeg River and across the Great Lakes

to Montreal. This trade was developed by the men who followed in Radisson's footsteps, travelling and trading. Later, the white men themselves started trapping. For a long time they caught the finest of beaver, muskrat, fox, marten, otter, fisher, and mink. Indeed, for over 275 years after Radisson's wonderful stories, there was a fortune to be made by trapping and trading in Manitoba's woods and marshes.

But there was one thing wrong.

The early trappers paid very little attention to what was happening to such animals as the buffalo and the beaver, although they knew that a great many animals were being killed. Everyone knew that in order to have furs every year the men must not kill too many of the animals. Yet the old ways of trapping let them kill any animal that was good enough to sell.

There was a reason for this. Most of the trappers wanted to leave enough animals to raise families for the next year's trapping. Yet they were afraid that if they did, someone else would take the good animals they left. This was because several trappers might be working in the same section. Every man took all he could get, trusting to luck to bring him more animals the next year. Manitoba's fur-bearing animals, as they are called, were rapidly disappearing.



Canadian Pacific Railways

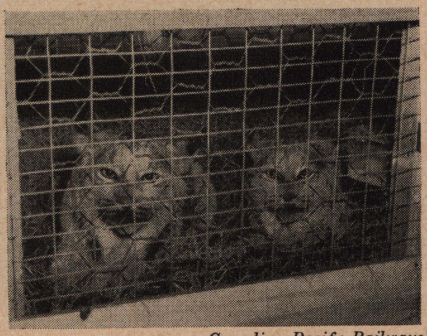
Glacier Blue Fox

Finally she had to do something about it. She tried three things: (1) fur farming, (2) registered traplines, and (3) a muskrat ranch!

FUR FARMING

Fur farming was really started by a few men who were thinking of the years to come. When they saw how quickly the fur-bearing animals were disappearing, they thought of a plan to keep from losing these animals altogether. They captured a few fox and mink alive, and kept them to raise their young ones in cages. There they could keep them carefully, feed them well, and choose some of the best animals each year to sell. This they called fur farming because on special farms, in row after row of wire cages, they raised nothing else but fox or mink.

On fur farms the animals have less freedom than in the woods, but they have better care and protection from sickness and enemies. They are given a wooden house which is cleaned every day, and they get regular meals, made as carefully as your own at home. A fox dinner may be milk and vegetables, eggs, meat, and fish. Mink, too, get meals especially prepared for them. The fur farmer gives his animals the best of care while they live. When he



Canadian Pacific Railways

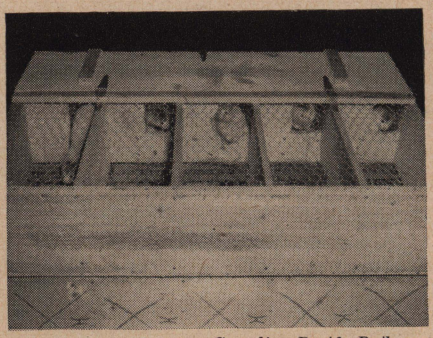
Canadian Lynx

kills them, he does it quickly and as painlessly as possible. Fur farming is one way in which we make sure that we will always have plenty of furs.

REGISTERED TRAPLINES

Not enough animals can be raised on farms, though, and it is harder work than leaving them free. It is easier to let them grow up happily by themselves and catch only what we need each year. Manitoba has many trappers who are doing well with what are called *registered traplines* in special parts of the North.

A registered trapline simply means a piece of good forest and marsh land for which a trapper signs or *registers* his name. It is his own reserve on which no one but himself may work so long as he takes good care of the wild life on it. He may build small dams to help beaver or muskrat. He may kill a hawk or owl that is destroying the furry animals. Most important of all, he never traps all his animals. He helps in every way he can with the building of homes and the raising of furry families. Each year a government inspector checks these traplines. Every man must show well-kept land if he wants to register for it the following year.



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Platinum Mink

In this way Manitoba's trappers are trying to keep her forest lands rich in wild life. All across the North, men watch anxiously. They know that whatever destroys the wild life of the woods destroys, as well, their own means of getting food and clothing. Yet sometimes a bigger piece of

National Film Board

A tractor train carrying trappers to the fur country

work than any one man can do, needs to be done. On the Saskatchewan River, not far from The Pas, such work was needed in 1935. Where the old voyageurs once paddled swiftly toward Lake Winnipeg, there took place a great experiment. The story of that experiment is the story of Manitoba's favourite furry creature, Jerry Muskrat.

Just as the beaver was once Manitoba's most important fur-bearing animal, now the muskrat comes first. This little fellow is smaller than the beaver and has softer fur, but he lives in marshes, building his home much as beavers do. He eats plants that grow in wet ground and stores his winter food in plastered mud piles like haycocks set in the water. Water he must have. He has webbed feet, and he loves to swim. Indeed, he cannot live without water.

National Film Board

Setting muskrat trap

In the early 1930's when there was very little rain or snow, the shortage of water changed some of the muskrat's favourite marshes into dry land so parched and cracked that it looked like a jig-saw puzzle. The muskrats almost disappeared. Something had to be done.

It was then that the government engineers set to work on their experiment. They turned Summerberry Marsh into Canada's first muskrat ranch! They needed thousands of acres of marshland where muskrats would make their homes. They made their marsh by digging ditches to carry water in and by building dams and dikes to hold the water

once they had it. Then they turned part of the Saskatchewan River water onto the land and left the rest to nature.

The water spread out for miles, and soon the muskrats were coming back. In 1936, there were 5,000; three and a half years later, there were 200,000. By 1940, five years after the work started, men were trapping again over one

National Film Board

The Day's Catch in Camp

hundred and thirty-five thousand acres of good marshland. Everyone was delighted with the success of the experiment. Almost at once three other marshes were treated in the same way.

Now Manitoba has several parts of her northern trapping grounds protected for years to come. Late each winter the

men go into the marshes by tractor train, taking their camping supplies over the ice and snow. The government supervisor keeps careful count of the number of animals taken. No man is allowed to take more than his allotted number, or *quota*, as it is called.

TRAPPING

The work of trapping and of preparing the furs for market demands skill and knowledge. Under the modern plan, an experienced or *senior trapper* takes charge of a group of younger men to show them the proper handling of traps and furs. Often a group of trappers will work together all through the trapping season until each man has his quota ready for sale. However a man works, alone or with others, he wants the best returns for his work. He is anxious to have his furs of the best size and quality.

The traps are set inside the muskrat houses. With proper care, each house will give four or five rats. Through the side of the house which sticks up above the ice, the trapper makes a hole so that he can set the trap down on the mud floor inside. The opening in the wall must then be covered over tightly with moss and twigs so that no light will warn the rats that their house has been opened. If the opening is not covered carefully, and light gets in, the rats trip the trap. That is, they set it off without getting caught in it. As soon as a catch is made, the traps are set again for another try.

Traps must be checked often, for no man wishes to leave his animals long in the trap. That causes needless suffering. Also, if the traps are left unchecked, a rat may even chew

off his own leg to escape. Many rats are caught with a leg missing. In a few cases a lucky trapper has caught two rats at a time but that is something which does not often happen. The trapped rats are killed and taken to camp.

National Film Board

Skinning a Muskrat

When the rats are brought into camp they are skinned. Often the trapper's wife will do the skinning while her husband is out on his round checking the traps. Skinning requires skill. The muskrat is held head up toward the skinner while the skin, or *pelt*, as it is called, is peeled upward from the tail all in one piece like a short section of tube. Great care is taken not to mark the pelt in any way. Then

each pelt is placed on a separate board, called a *stretcher*, and hung up to dry, fur inside. The stretcher would remind you of a very small ironing board like the one in your kitchen at home. It is tapered enough at one end to fit into the head and muzzle of the rat pelt. The pelts are left on the stretchers until they are dried.

National Film Board

Checking the Furs

While the pelts are still in camp they are checked by the *game warden*, a man who knows furs well and keeps close count of the number and the value of the animals caught. In camp, too, the pelts are given their first sorting, or *grading*, before they are tied up in bags with the trapper's name on the outside. These bags are stored in a large

cabin until the spring break-up of the ice. From the cabin the furs are then taken on barges pulled by a motor launch as far as The Pas, where they are transferred to trains and taken south to Winnipeg.

As soon as the furs have been taken out, the engineers open the dams to let the spring flood water pour in. The whole story starts again for the next year. Nowhere else in Canada has anyone tried to build and keep up such large marshes for the raising of muskrats. Manitobans paid $150,000 to do the building, but by 1945 the muskrat furs sold for more than $700,000. The muskrat ranch was a success. Manitoba trappers were happy men.

MARKETING FURS

Once the pelts arrive in Winnipeg, what happens? In the old days, furs went directly from the West to London or Montreal. Now Winnipeg is one of the greatest fur markets on our continent and Canada's largest centre for selling muskrat pelts.

When the trappers' winter catch arrives, the bags are unloaded at large fur warehouses. These are long sheds where skilled *graders* separate the pelts into groups of different kinds. Some might be "large", some "heavy", some "papery". Pelts of the same kind are collected to be sold as a *lot*. A *lot* may be as many as a thousand skins of top quality or just a few poor ones. From each lot a few are taken for samples to show the buyers. The rest are bundled together and prepared for shipping.

Furs are sold *by auction*. That is, no price is marked on them. Buyers from all over North America come to

Winnipeg and *bid*, or offer to pay a certain amount of money, for the furs. The man who *bids*, or offers, the most money for any lot of furs gets them for his company. The bidding is so fast and the lots of fur are so large that often a quarter of a million dollars will be paid out in an hour. In the last few years the value of pelts sold from the prairies on the Winnipeg market has been as high as eleven million dollars a year.

FUR FINISHING

Not all these furs are sold to people outside of Manitoba. A great many go to companies in the province. Many men are kept busy changing plain Jerry Muskrat into the beautiful muskrat and Hudson seal coats you see in shop windows all across Canada. *Fur-finishing*, as this work is called, is a business that needs very skilful workers. It is one of Manitoba's chief manufacturing industries. The making of one coat requires about sixty muskrat skins and several weeks of work by a larger number of people. Let us see how a coat is made:

When the *raw pelts*, as they are called, reach the factory they are starting on an adventure which changes them from ordinary skins into coats that are soft and beautiful. From the time the adventure starts, each pelt goes through many steps in the work of dressing and dyeing. Surely no one's skin ever received more careful attention than that of the furry muskrat.

The *raw pelt* comes into the factory dry and stiff as the trapper dried it up in the Northland. Before it can be "dressed", it must be softened so that it can be easily

handled. The skins are soaked well with water and placed in a drum called a *kicker* where they are pounded by a heavy weight to make them soft. Then they are ready to be *fleshed*.

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The "Kicker"

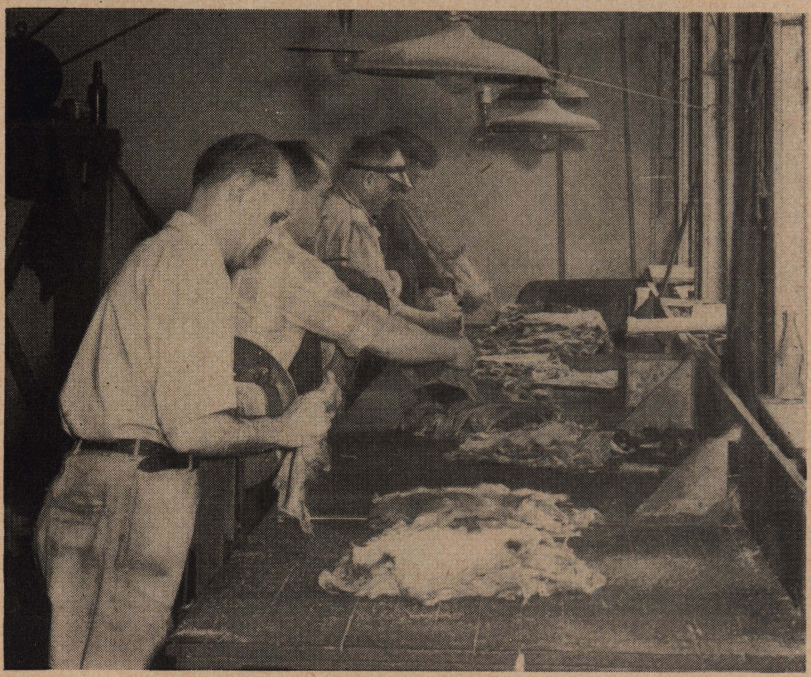
FLESHING

The *flesher* needs a sharp eye and a steady hand, for he works with a sharp knife, shaped like a wheel, which is turning steadily. He holds the skin tightly stretched, letting it brush quickly across the sharp edge of his knife so that the extra layers of fat and skin are scraped away. One slip

of his hand would let the knife cut through the pelt like a hot knife through butter. He swiftly peels the extra flesh from the inside of the pelt. It is now ready to be *tanned*.

TANNING

Tanning means preserving the skin so that it will not rot but



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Fleshing Machines

will become tough like soft leather. This is done by placing the skins in large tanks filled with a liquid that has *tannin* in it. *Tannin* is a kind of juice taken from the bark of oak or spruce trees. It does for the pelts what vinegar does for pickles. It preserves or cures the pelt, making the skin

under the fur something like the chamois that is used for lining your winter coat. Chamois, too, is a skin which has been tanned.

In the tanning, the pelts lose much of their natural oil, turning stiff and crisp so that they crackle when you handle them. To soften them again they must be well *oiled* so that some oil will soak in to take the place of what was lost. A mixture of oils from animal fat, vegetable fat, and mineral oil is used. This oiling is important, for if it is not done properly, the oil may come out after the coat is made up. Only experience will tell dressers what is the best mixture, and it is a trade secret. The oil is rubbed on the tanned skin so that it will soak through, softening the skin. Each pelt as it is oiled is passed on to the *stretcher*.

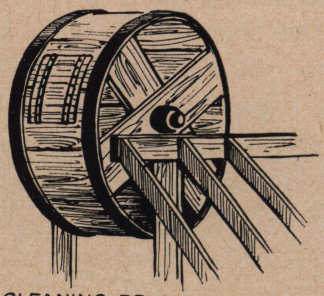
Muskrat and beaver pelts, which are cut and laid out flat for finishing, may be stretched by hand. Fox, which is left like a tube open at both ends, has the fur turned inside during the oiling and is stretched on a metal frame that looks like a large pair of dull scissors. The pelt, still fur inside, is pulled over the scissor-like end. Then the two 'blades' are spread open so that the skin is stretched outward. The body and each of the legs needs a separate stretching. A skilled stretcher can handle a large fox pelt in a minute or less.

CLEANING

Once the pelts are softened again, all that remains of the dresser's work is the *cleaning*. Each pelt must be cleaned thoroughly until it is spotless and gleaming. This cleaning is done in a strange way. Any of our usual ways of cleaning

would take out the oil and harden the skin again. Pelts must be cleaned with sawdust in a large revolving drum.

Hardwood sawdust is used. This is made by grinding up the shavings that are left by lumber companies that handle maplewood for furniture or flooring. The sawdust made in this way is fine and powdery. Shipped in bags to fur-finishers, it is kept dry until it is needed. It makes the best of cleaners, for it acts like a blotter, drying up the extra oil and leaving the finished pelt ready for use. As many as a thousand muskrat pelts may be cleaned in one drum with three or four changes of sawdust. This cleaning, by turning pelts around and around in the fine sawdust, lasts many hours.



CLEANING DRUM

Pelts that are intended for muskrat coats are now ready to be dyed and sent to the furrier. Those that are to make Hudson seal coats need a little more work. First is the *plucking* of what are called *guard hairs*. *Guard hairs* are the long, coarse hairs which act as a protection for the shorter soft hair that grows thickly close to the skin. If the muskrat is to be left as muskrat, the guard or coarse hairs are left on; but for the Hudson seal this hair is removed to leave just the finest and softest of under fur. To make plucking easy, the fur must be kept dry but the skin dampened. The pelts are laid, fur side up, on wet sacking overnight. Dampening loosens the roots enough to allow the plucker to pull out

the long guard hairs quickly and easily. The fine, soft fur that is left is carefully trimmed or *sheared* to velvety smoothness. The pelts are now ready for the *dyer*.

Muskrat coats are various shades of brown. Hudson seals are black. The dyer's work is to dye thoroughly the

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Dyeing Furs

outer, fur side of the pelt but leave the inner side its natural light shade. He stretches the pelt out and smears the fur side with a thick jet-black dye for Hudson seal pelts, or a heavy brown for the ones remaining as muskrats. The thick dye paste is allowed to dry before the pelt is dyed again. Several treatments may be necessary, especially to get the

darker colours. Once the dyer is certain that the colour has gone in to the roots, the pelts, both brown muskrat and Hudson seal, are ready to go merrily on their way to the *furrier*.

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Piecing

THE FURRIER

The *furrier* is the man who makes up the dressed and dyed pelts into coats and matching muffs. If your mother wants a coat or muff made especially to suit her, it is to a furrier that she goes. He designs, fits, and sews the coats ready for

his customers. Matching and joining the pelts require the most careful workmanship. The black, glossy pelts for Hudson seal coats are trimmed in a zig-zag fashion by a skilled fur-cutter who passes the fitted skins to the machine operator for sewing. These pelts are fitted together in

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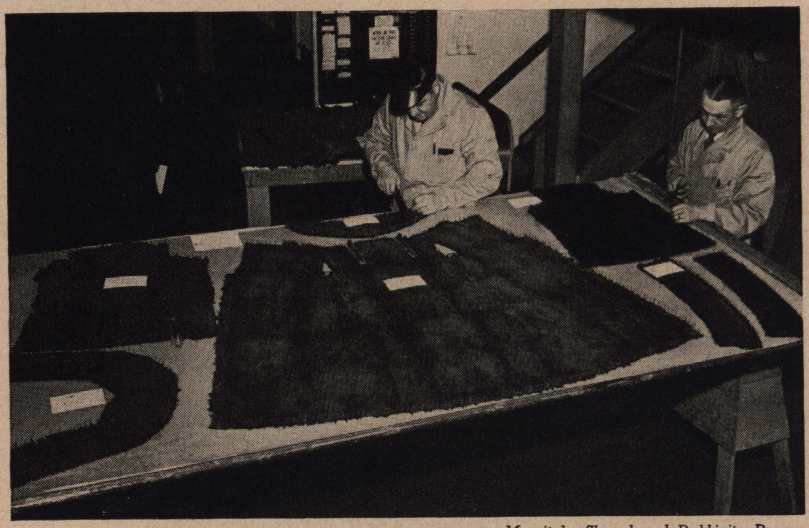
Dropping

square blocks. Natural muskrats must be made to appear long and thin when they are put into the coat.

To give this appearance each pelt is cut into strips a quarter of an inch wide. These are sewn together in such a way that the pelt is changed from a skin ten inches by twelve inches to a long, thin strip about forty-five inches

long and two inches wide. This changing is called *dropping* and each cut is known as a *drop*. The work is done so cleverly that the finished coat shows none of the changing. The long, narrow strips give a striped appearance to the coat once it is marked.



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Making the Coat

After being sewn the coats are pressed and allowed to dry. They are given a good cleaning by hand and treated with a special dressing, a clear liquid that gives the coat a protective cover or *glaze*. Then, at last, plain Jerry Muskrat is ready for the store windows. He has been cleaned and tanned and polished to make the best of his furry, brown, winter jacket. He comes out in many different colours once the dyers get hold of him. Yet he is still the same little fellow to whom many people owe a fine, warm, coat during the winter. Six out of every ten pelts handled in

Manitoba are of the furry muskrat from the marshlands of the North.

* * *

This is the romance of fur, the story of the animals of the wild and how they give us beauty and warmth for the

Manitoba Travel and Publicity Bureau

Coats for the Ladies

cold, winter months. Jerry Muskrat is only one of many animals used for furs in Canada. The protecting fur that Nature gave to the muskrat, the mink, the beaver, and many others, man has learned to use for his own protection from the cold.

At one time only by trapping wild creatures could we get these valuable furs. Now we have learned to develop our own muskrat ranches and fur farms. Manitoba is proud of her fur industry for it serves many people in all parts of Canada and in the rest of the world.

Canadian National Railways

Prairie Grain Elevators

Chapter VI

"The Hunger Fighters"

MANITOBA was the first of the three prairie provinces to start winning for Western Canada the nickname, "bread basket of the world". In 1876 the first carload of wheat was shipped from Winnipeg through the United States to Toronto. On that exciting day the world began to hear of "Manitoba Number One Hard", the best bread-wheat yet grown. The first wheat train to roll east over the gleaming tracks of the new Canadian Pacific Railway nine years later led the way for hundreds of others to follow.

If Radisson's furs gave Manitoba her oldest industry, those plump, golden kernels have given her her largest. Thousands of Manitobans have become "hunger fighters" for their fellow men.

People get food in four different ways: by hunting animals of the wild, by herding animals for milk and meat, by growing grain, fruit and vegetables, and by catching fish. All these ways of getting food, man has learned to use. In some places he uses one way; in others, more than one. This is because some parts of the earth are better than others for getting the world's food supply. Manitoba with her broad, fertile plains and many lakes, is one of these better places.

At one time, the plains were used only for hunting. The Indian, and even the early white man, depended on his skill with bow and arrows or with a gun to get meat for his meals. Gradually more people came here, herding cattle,

Canadian National Railways

A Good Crop of Oats

farming, and fishing. Hunting became less important. Now Manitoba uses the other three ways of producing food for herself and her many customers.

Cattle, brought from the south in 1822, started the early settlers herding on their small farms along the rivers. The coming of big machines and the lessons learned from the

Canadian National Railways

Cutting Wheat

Mennonites gave them their large grain fields. The Métis and, later, the men of Selkirk near the mouth of the Red River, organized the first lake fishing. Next, poultry, dairy cattle, honey, fruit, corn, sugar, and sunflowers were added to the growing list of crops and livestock. Following Quebec and Ontario, Manitoba has become a land of *mixed farming*. Experience has taught her men that they can use their land best by producing many different foods.

GRAIN GROWING

King of the western farm is grain—wheat, barley, oats, flax, rye. The story goes that the Red River Settlers "did not taste bread for six years" after their arrival in the West. Certainly their sons and daughters do their best to make sure that does not happen again. The mark of almost every Manitoba town is the tall tower of the grain elevator rising above the fields from which it draws its yearly harvest of golden grain.

Ploughing is done in the fall; seeding, in the spring. Anyone who has kept a garden will understand grain-growing. A garden is dug, raked, laid out in trenches and seeded. It must be watered and weeded. At the proper time the vegetables are taken in for winter. The working of farm land is much the same with larger tools or *implements*.

On the farm *ploughing* takes the place of digging. Sharp, knife-like blades cut into the earth, turning it over in rows called *furrows*, so that grass and weeds are buried to rot and form good soil. The large clods of earth left behind the plough must be broken down by a *disc-harrow* or disc. A *disc* is a long row of sharp-edged steel plates which turn steadily as they are pulled across the field. Fields that have been used for many years are often *disced* without being ploughed. Discs turn the soil as the plough does, but not so deeply. They leave some plant growth on top. This is what the farmer wants, especially if his land is sandy. In the dry years he learned this way of preventing the wind from blowing the good top soil off his fields.

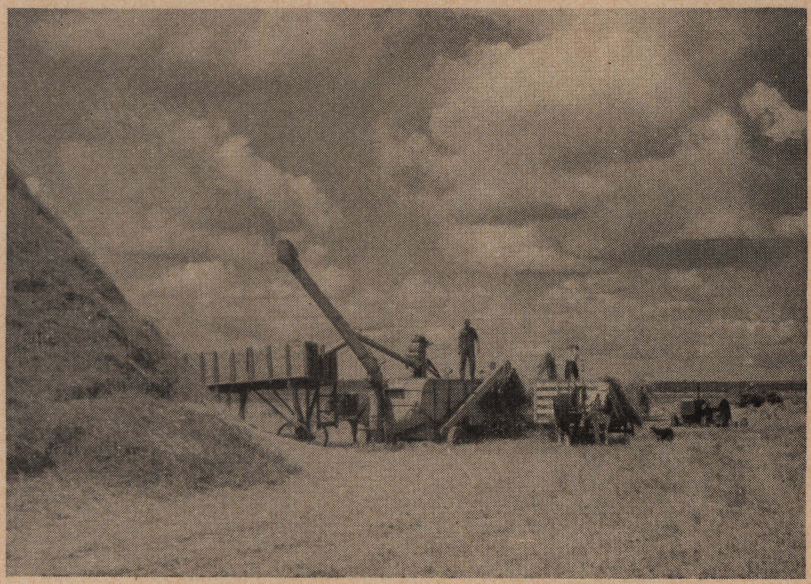
The farmer does his raking with a *drag-harrow*, a long iron frame set with sharp spikes which dig into the earth as they go along. The spikes break and level off any soil lumps left behind the disc. Modern farmers, using a tractor, pull both the disc and this harrow, one behind the other. This saves time in the spring rush and leaves fields ready for seeding with an implement called a *drill*.

A *drill* is a long, wooden box above a set of steel plates which turn much as the plates on the disc do. Drill plates work in pairs, however, almost touching in front and about two inches apart at the back. In turning they mark out a set of shallow trenches across the field. Between each pair hangs a small metal tube which drops seed from the seed box down between the plates. A few links of chain dragging behind cover the grain seeds as soon as they are dropped. With rain and sunshine the grain is ready to grow.

Wheat grows best with plenty of rain at the start, regular showers while it is growing, and warm, bright sunshine in July and August while it is ripening. This, Manitoba can give. The value of a crop is counted by the number of bushels grown on each acre of land. The part of the grain plant which carries the grain is the *head*, and the rest is *straw* down to the *root*. Long heads and many of them make a valuable crop. Light, sandy land may give only one or two heads for each seed planted. Heavy, rich land may give as many as six or seven long, heavy heads. The rich earth of Manitoba's river valleys gives heavy crops of large, plump kernels with plenty of *starch* and *gluten* in them for making the world's bread.

Harvesting begins when the grain is golden brown. The cutting may be done with a *binder*, which has a sharp knife

working back and forth snipping off the grain close to the ground. As it is cut, the grain drops back onto moving rolls of canvas which carry it up into the machine. The stalks of grain are gathered and bound into bundles called *sheaves* which are dropped on the ground in rows. A man working



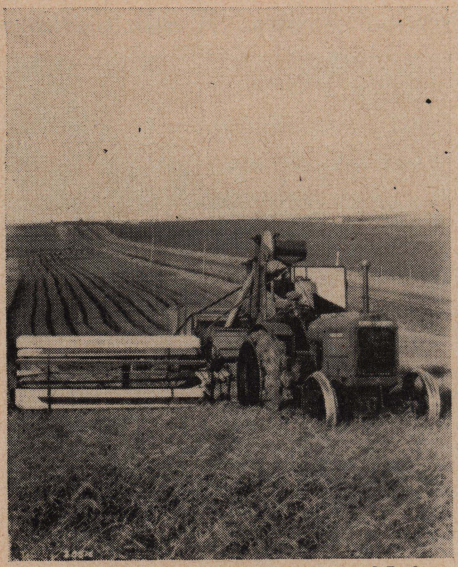
Manitoba Travel and Publicity Bureau

Threshing Machine at Work

along these rows sets up eight or ten sheaves, heads together at the top, in a *stook* to ripen a few days longer.

To take the grain from the plant, the sheaves are collected and fed head first into a *threshing machine*. It beats the heads between rows of rake-like teeth. The grain is sifted out to be poured down one spout while the straw is blown out through another. Often this machine is called a *separator* because it separates the grain from the straw.

Wheat, oats, barley, flax, and rye are all handled alike unless a farmer wants some oat sheaves kept for his livestock. On many farms *combines* are now used. A *combine* cuts and threshes the grain all at one time as it travels around the field. Straw is blown out the back while the grain is stored in a large bin or *hopper*. When the hopper is full, the grain is emptied out into a truck which delivers the grain to the elevator to be weighed, graded, and stored, ready for shipment to the mill.



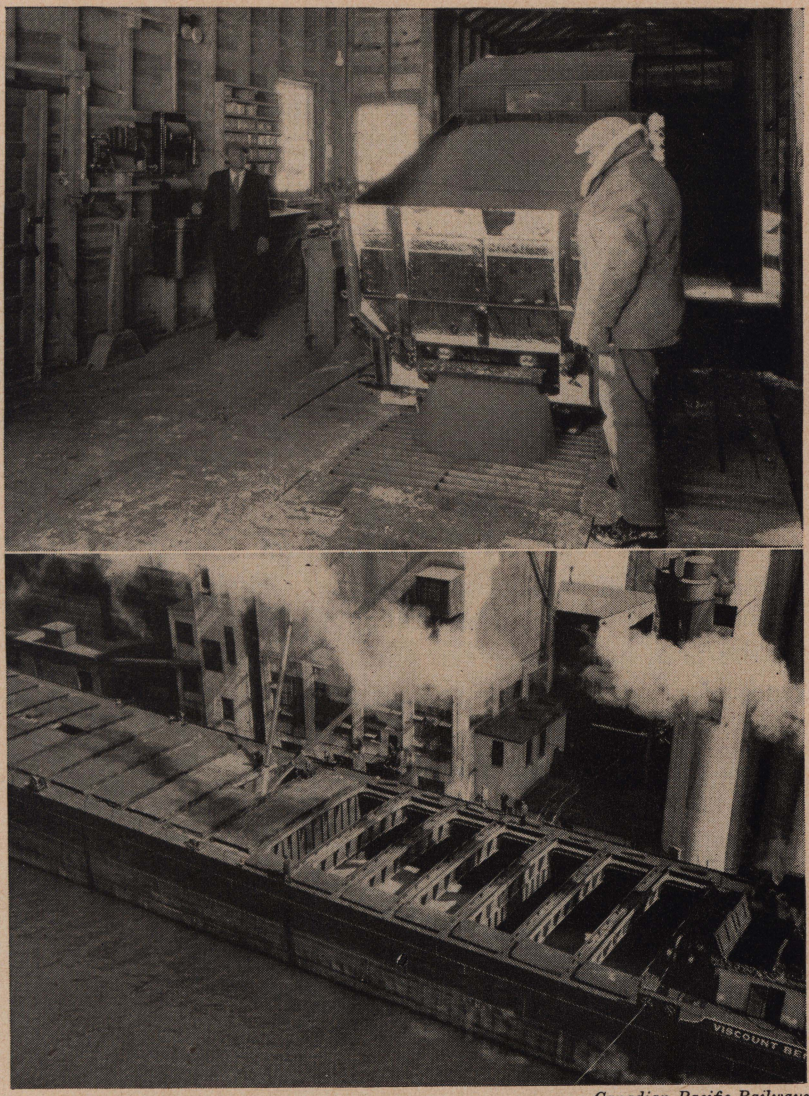
Canadian National Railways

Combine at Work

Wheat for flour, oats for oatmeal, barley for malting, flax for linseed and linseed oil—all pour into the elevators. Carload after carload is shipped to Brandon, Winnipeg, St. Boniface, to Eastern Canada and across the Atlantic to be prepared for use. Of them all, the most important is wheat. It is wheat that is so badly needed for the daily bread of millions of Europeans, wheat and wheat flour.

MILLING

The making of flour is known as *milling*. In milling, the wheat is cleaned, ground, and sifted without being touched



Canadian Pacific Railways

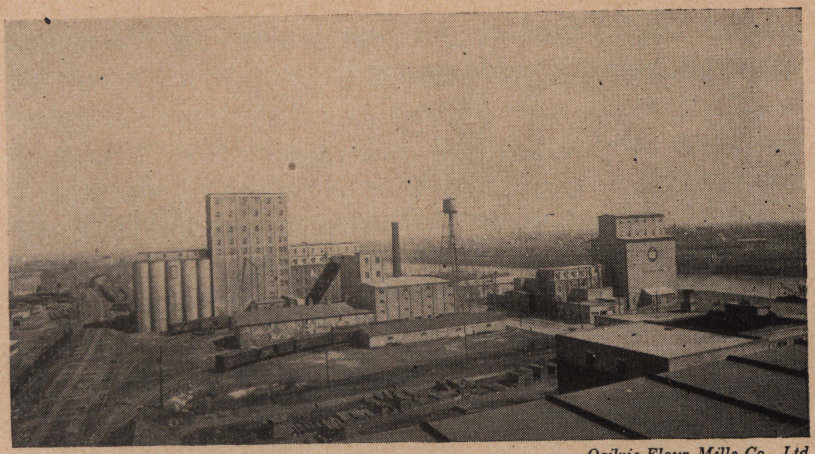
(Top) Truck dumping grain at country elevator
(Below) Loading lake vessel at terminal elevator

by hand. From the time the grain enters the mill until the flour appears in bags ready for market, sets of moving belts do all the carrying from machine to machine.

First comes a thorough cleaning. As it comes into the mill, the grain is passed over *sifting screens* which keep the good grain but let poor kernels and weed seeds fall through. These *screenings*, as they are called, are used for poultry feed. The good wheat goes on to be blown by fans to take out more dirt. Then it is washed in machines that are very like your mother's washing machine at home. The wet grain is then dried by warm air forced through it by electric fans. It is ready for the first grinding.

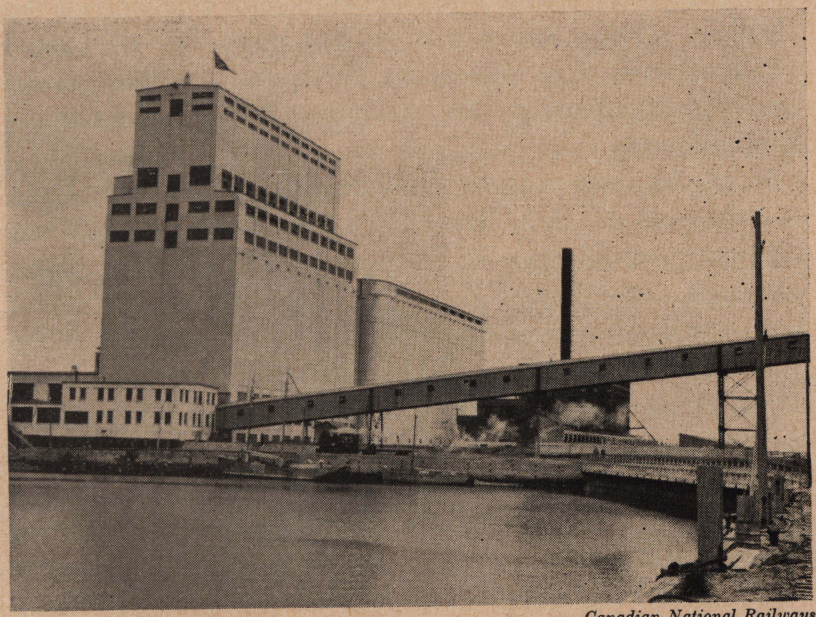
Coarse "*breaker*" *rollers*, working in pairs, do the first grinding. One roller turns more than three times as fast as the other. They crack and crush the kernels enough to remove the dark, outer skin or *bran*. Each time the grain is rolled it is sifted. This rolling and sifting goes on until all the bran has been taken out. The bran is then packed ready for sale. The rest of the cracked kernels, called *middlings*, go on farther.

It is during the second grinding that the flour is made. The middlings pass through sets of rollers and sifters which grind and sift in turns much as the "breakers" did. These rollers, however, are heavy and close together to produce the finest flour. The sifters, instead of being fine screening, are now layer after layer of fine, white silk. In the final step, the sifted flour is put into a huge, revolving drum made of a steel frame covered with heavy white silk. What sifts through the silk of this drum is the finished flour. It is graded, put into bags by machine, and loaded into cars ready for shipment wherever it may be sold.



Ogilvie Flour Mills Co., Ltd

Ogilvie Flour Mills



Canadian National Railways

Elevator at Port Churchill

Hard wheat flour is the first weapon of Manitoba's fighters against the world's hunger.

RAISING LIVESTOCK

Livestock from the farms—cattle, sheep, and hogs—are weapons for the hunger fighters, too. Indeed, the first food of the early settlers was not grain flour but meat, *pemmican* made from the meat of the buffalo.

Many Métis earned their living in the early days by making this famous food and selling it to the fur-trading companies for the use of their men. Two large hunts were held each year, every spring and fall, when hundreds of wild buffalo were killed on the plain south and west of the "Forks". The meat was cured and made into pemmican which could be kept for months if necessary. Both men and women worked at the time of the hunt to get in the harvest of buffalo meat.

First, the meat was cut into thin strips to be dried and smoked over the fire. The smoked meat was pounded into a powder and mixed with fat to make a kind of fine paste. This paste was packed into a bag made of the buffalo skin and melted fat was poured over the top to seal it. When it was needed, pemmican could be cooked in several different ways. It was good food for the voyageur or trapper who had little time to prepare food and little room in his packs to carry it. For all the early pioneers, pemmican was nourishing and strengthening, when often other food was not to be found anywhere.

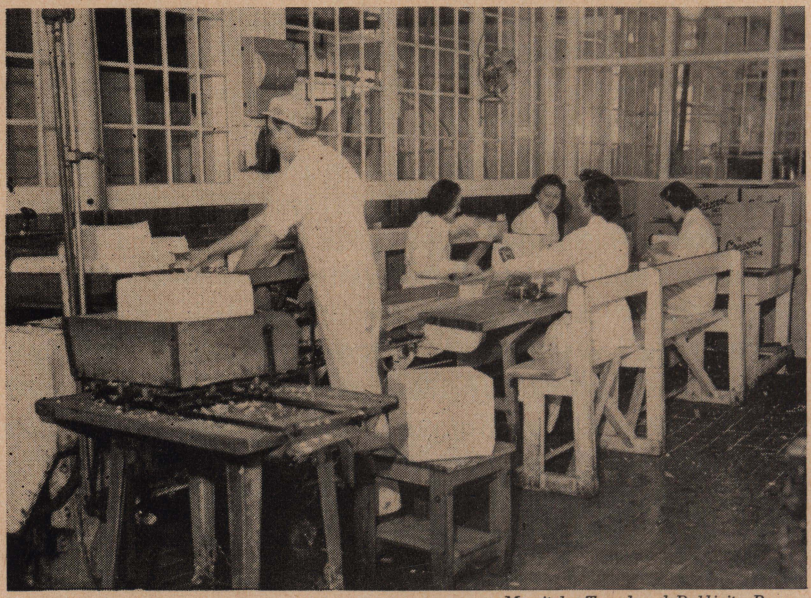
The pemmican trade was the beginning of a meat business for Manitobans. The work of producing meat for sale has

grown with the West to the great industry it is now. Not far from what was once the home of the first Métis meat dealers are the modern meat-packing plants of St. Boniface. In these packing-houses, the men and women of to-day carry on the largest manufacturing industry of the province. To these plants are shipped cattle, sheep, and hogs from all over Manitoba and a large part of Saskatchewan. The work of handling and preparing meat for food has led to the building of the St. Boniface Union Stockyards, the largest stockyards in the British Empire.

The Manitoba farmer finds that it pays to raise grain and livestock together. Hogs use waste scraps from the farm-house and during the summer cattle and sheep find pasture on what would otherwise be waste grasslands. Hay for winter can be cut and stored while the grain is growing. Clover, which is planted to make rich soil for grain crops, can be cut for cattle feed, leaving only the roots to be ploughed into the land. Manure from the barns goes back to the land as fertilizer. If grain prices are low, it may pay better to use the grain for livestock.

The milk cow alone would make "mixed farming" worth-while. Although cattle may be raised mainly for their meat, still the dairy cow is an important figure in the Manitoba countryside. From almost every farm her cream is shipped regularly to one of the seventy creameries which produce the finest of butter. Cheese is made from whole milk in a small district south-east of Winnipeg, in factories owned by the farmers themselves. Butter is made from most of the cream from the other farming districts. Hundreds of gleaming cans of milk or cream rattle merrily to market by train or truck every week.

Cream must always be of the best. All cream is graded when it comes into the creamery, and its price is marked and paid according to its richness and sweetness. In the creameries and dairies themselves, churns, storage rooms, and all other equipment are checked regularly for cleanliness. Rich, creamy-orange Cheddar cheese and fresh,



Manitoba Travel and Publicity Bureau

Creamery Butter

yellow butter are precious in a world where people are still going hungry. Food must be carefully prepared and protected. Manitoba butter, which has been winning top honours in Canada ever since 1926, goes out to customers, 900 carloads a year. Dairy cattle to produce milk and cream, butter and cheese, are almost as important as livestock raised for meat.

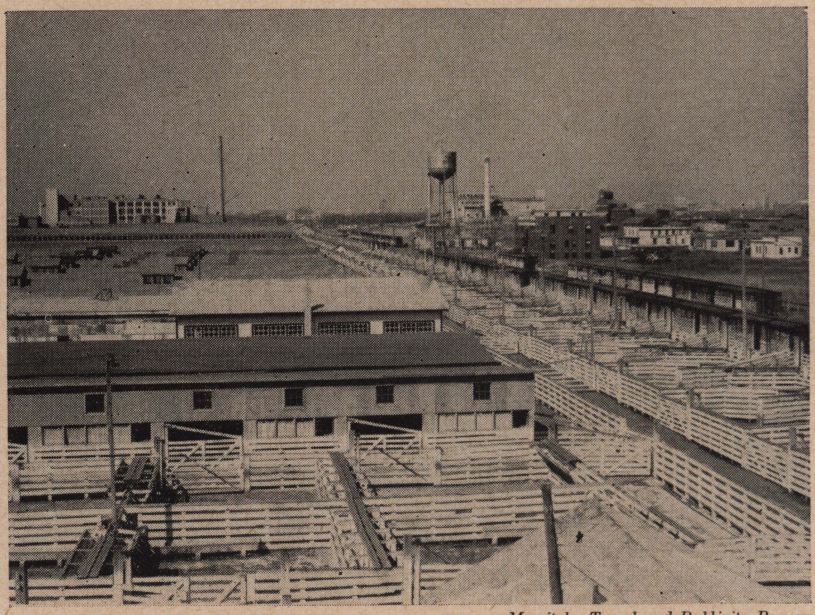
Cattle, sheep, and hogs are pastured outside during most of the year. Hogs are fed all year round with chopped oats and barley as well. A great many animals intended for meat are sold in the autumn or early winter before winter feeding begins. Although there are not many winter days too cold for stock to be outside, deep snow covers most of

Manitoba Travel and Publicity Bureau

Cheese Making

the pasture by the end of December. This makes it necessary to begin winter feeding with hay and grain, which is expensive. Calves may be kept over one winter but seldom over two, unless they are kept for dairy cattle. Animals ready for sale are fattened for a few weeks on oats and barley, then shipped by train or truck to Brandon or to St. Boniface stockyards for selling to one of the large meat-packing companies.

Stockyards are rows of small "pens" separated by high, white, wooden fences. A branch railway line runs close along the side of them so that stock brought in by train may be unloaded directly into the pens. Each pen is connected through a gate with a long, narrow lane along which the stock can be driven out. In the pens the stock are kept,



Manitoba Travel and Publicity Bureau

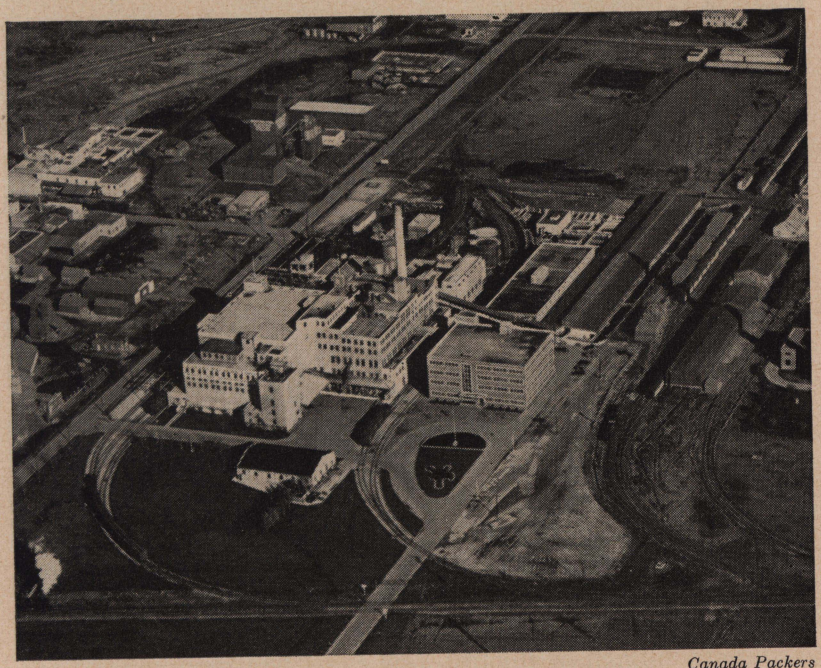
Stock Yards, St. Boniface

fed, and watered, until they are taken to the *selling ring*, a larger pen where they are to be sold. The stockyards do not belong to the packing companies, but in St. Boniface two of the largest packinghouses stand near by. This makes it easier to handle the livestock once they have been bought. It is in the *selling ring* of the stockyards that *buyers* from

the packing companies look over the animals carefully and buy for their companies the ones they think best for meat.

MEAT PACKING

Because your mother is particular about the meat she buys



Canada Packers

Meat Packing Plant, Winnipeg

for your dinner, the buyers have to be particular about the animals they buy. If an animal is too fat or too lean, if it seems badly shaped or unhealthy, in any way, the buyer may not take it, or he will not pay as good a price for it as for first-class meat. Good meat is so important, especially if it is bacon for shipping to Britain, that the Canadian

National Film Board

Refrigeration Rooms

Government has made a law that every hog must be graded before it is sold. This grading is done very carefully. Only the best quality of hogs are given Grade "A".

Farmers who bring animals in for sale generally bring them in the best condition possible. If the animals have lost weight during a long train journey, they may be rested a few days in the pens before being sold. As a rule, though,

the men are anxious to sell right away. When they are sold, the animals are priced according to the value of their meat. The hogs are priced according to their "grading". They are paid for by the pound or by the hundredweight.

When the animals are received by the packing-house, they are placed in *resting pens* until they are taken to be killed. In both the stockyards and the packing-house, the different kinds of livestock are kept separate. One section is for cattle, one for sheep, one for hogs. Manitoba packers handle all three but, since Wiltshire or English bacon is the chief meat prepared for sale outside Manitoba, the most important animal of the three is the hog. He must be handled with care.

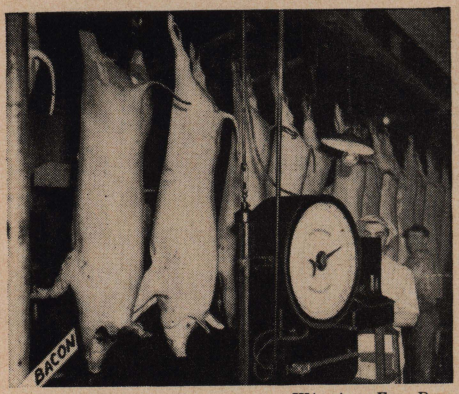
DRESSING THE MEAT

A large part of each packing-house is used for the preparing or *dressing*, as it is called, of fresh pork, ham, and bacon. The work of preparing the hog for food has been developed over the last fifty years to give us the very best of finished meat. Let us see something of the way it is done:

The animals to be killed are taken from their resting pens in groups of not more than fifty. They are nervous in the strange pens and lanes and difficult to handle when they scent danger. So they have to be led to the *killing-floor* of the packing-house. Although men are driving the animals from behind, a trained animal, often called a "Judas", is used to lead the way. With the Judas animal going ahead, the others gain confidence and follow with less trouble. Some Judas animals are used year after year to lead frightened fellow creatures to their death. Once the animals have

reached the killing-floor, the Judas is released for use again while the others are slaughtered for their meat.

Cattle and sheep are killed by striking them on the head with a heavy mallet. Hogs are shackled and raised up by one hind leg to be killed by sticking their throats with a knife. In either case the killing is done as quickly and as painlessly as possible. The hogs are bled for at least six minutes before they are dropped into the *scalding vat.*



Winnipeg Free Press

Handling pork on a moving chain

The *scalding vat* is like a long, narrow trough filled with hot water. The hogs are kept moving along this trough by the *scalding men* who push the bodies down several times so that they will be completely covered by the water. This scalding loosens the hair on the hogs so that it can be easily removed. Near the scalding vat is the *dehairing machine.*

In this *dehairing machine* the hogs are slowly passed through a set of moving rubber belts or beaters which have many small metal clips fastened to the ends. These clips are curved a little for scraping the hair from the hog. All the time that the hog is in the dehairing machine a thin spray of water keeps washing away the hair as it is scraped off by the beaters. Next, the best hogs for Wiltshire bacon are *singed* so that the skin will not be so hard to cut through with the knife. To be certain that all the hair is removed, the

hogs are then shaved by men using sharp knives. The whole hog is thoroughly washed before any cutting is done.

The next step is the opening of the body or the *carcass*. The carcass is opened on the under side right down the centre and all the inside organs are removed. At this point the government inspectors check carefully the meat and

Canada Packers

Cutting and Trimming

the inner organs. Any carcasses which show signs of disease are put out as "unfit for food". From the killing-floor the carcasses are taken to large refrigerator rooms or *coolers*. Here the carcasses are chilled quickly and left for forty-eight hours in a temperature just above freezing. They are then ready for cutting.

To save time and work, the *cutting floor* is close to the coolers. It is important that meat should be handled quickly and placed in refrigerator storage rooms without delay. A modern cutting room has a long, moving *conveyor table*, and every man in the room is a highly-skilled workman who does his part correctly but swiftly. As the cooled carcasses are carried along on the moving table, the men carry out their particular tasks when the carcasses reach them. Each step follows in proper order as the special pieces or *cuts* are prepared.

The back legs become *hams;* the front legs become *shoulders*. The body itself is cut into long strips called *backs* or *sides* of bacon. From along the backs the *tenderloins* are taken. For the Wiltshire sides that go to Britain, almost a full half hog is taken and carefully trimmed. The feet are removed from the hams and shoulders. The cuts that are to be sold as fresh pork are then sent to the "fresh pork" room. The cuts that are to be cured are sent to the *curing cellars*.

Curing meat means treating it with different salts and smoking it so that it will keep for a while and yet have a pleasant taste. The ham and bacon which you see in the stores have been cured in this way. Many have sugar added as well to give that sweet taste we all like. To get the right *cure* on the meat, careful work is needed. Some ways of curing are different from others.

The fresh meat may be put in a strong salt liquid called a *brine*, or it may be packed in dry salt until enough salt has soaked into the meat. The best grades of bacon are "dry" or "box" cured by putting them in boxes to stand for a while after they have been rubbed with a dry "cure"

made from a mixture of salts and sugar. For especially good bacon, the backs and sides are packed in curing boxes and each layer of meat is sprinkled with the curing mixture. After any of these "dry" cures, the meat must be taken out and soaked in water until the cure is spread evenly through the whole piece.

After the soaking, the meat is ready for *smoking*. Smoking dries the meat and gives it flavour. *Smokehouses* are like a set of rooms built one above the other up through several floors of the packing-house. The floor for each of these rooms is a heavy metal grate. The workmen can go into the smokehouse. Yet the grating allows the smoke to go up from the bottom to the very top floor. Steam pipes below the first floor are used to heat and dry the meat a little first. Then fires of hardwood sawdust are lit and the smoke drifts up to the meat on the different floors of the smokehouse. After the smoking, the meat is cooled and chilled. It is then ready to be shipped out for sale.

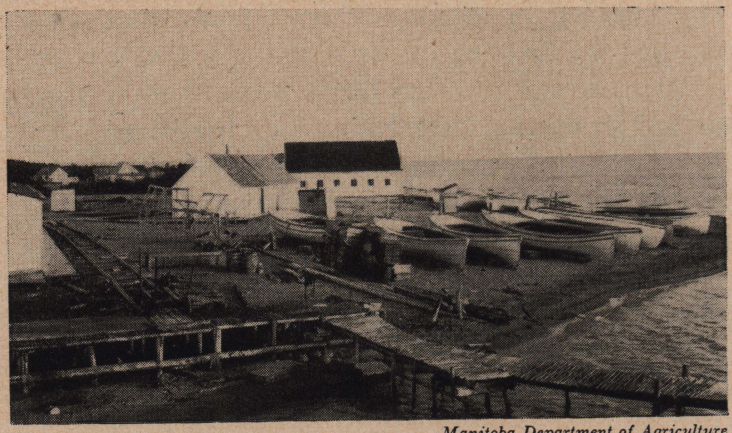
The finishing or *dressing* of hogs takes more time and work than the dressing of cattle and sheep, which are sold as fresh meat and in much larger cuts. Unlike the hogs, cattle and sheep are skinned after they have been killed and bled. They are cleaned and cut into halves or quarters. Then they are taken to large refrigerator rooms like the hog coolers. They are chilled quickly and stored for a day or two. This meat needs no further handling until it reaches the butcher shops. It is ready for shipment a few days after it is dressed.

It has been said that in the hands of the modern meat-packer, all of the animal except the squeal is used. Cattle become *beef;* calves become *veal*. Young sheep become *lamb;*

old ones become *mutton*. Hogs become *bacon*, *pork* or *ham*. Hearts, livers, kidneys, oxtails, tongues, and even pigs' feet are sold as fancy meats. Meat trimmings are canned. Bristles and hair are used for brushes; intestines, for sausage covers; horns and hoofs are made into glue. Fat is made into lard or soap, and skins are tanned to make shoe leather. Some special parts even go to make medicines. The rest is turned into chicken feed or fertilizer. Surely livestock are not only great "hunger fighters" but all-round servants of mankind!

FISHING

Prairie fishing seems a ridiculous idea, especially when the prairie is in the centre of a continent. Yet Manitoba's boldest "hunger fighters" are her six thousand freshwater fishermen in trim sail or motor boats with their glistening white sides and water-tight decks.



Manitoba Department of Agriculture

Warren's Landing, Lake Winnipeg

If the men and their families could be gathered together, they would fill a large town. As it is, scattered in small towns and along the shores of the lakes, they have built for themselves a thriving trade in pickerel, saugers, whitefish, tullibee, and goldeye. Their lives are full of adventure and

National Film Board

Gimli fisherman unloading pickerel

danger, for as well as being good fishermen they must be expert sailors. They must be warm-blooded, too, to face the icy winds of winter, for they do half their fishing without boats of any kind! In the dead of winter they fish, when the lakes are frozen up tight under almost two feet of ice!

You may think this cannot possibly be true. Yet it is. There are two main fishing seasons: one from early June to late October, and the other from late in November to the middle of March. The only "recess" for busy lake-fishermen comes at times when there is neither open water

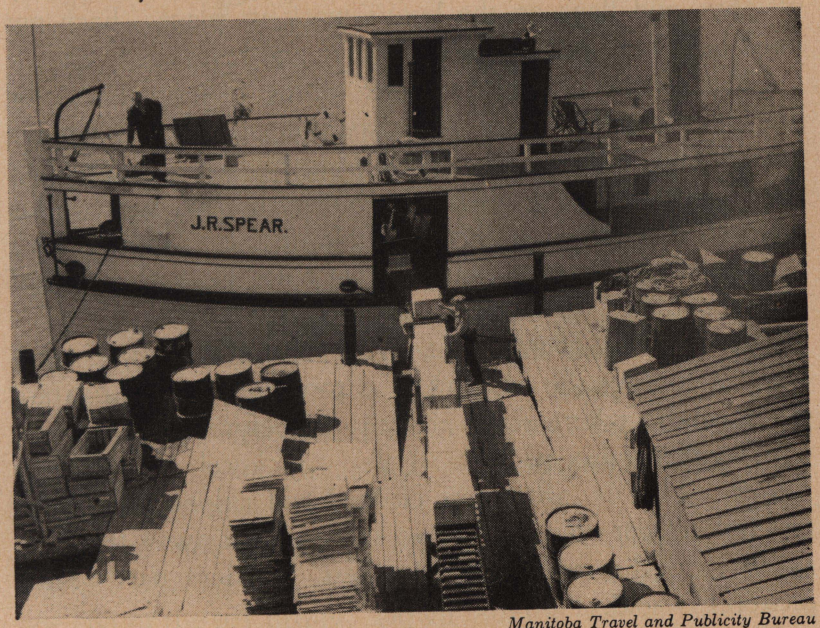
Manitoba Travel and Publicity Bureau

Off to the fishing grounds: tugs with fishing boats in tow

nor solid ice. The story of their lives with its work and adventure, either summer or winter, is worth knowing.

The net used in Manitoba is called a *gill net* because it catches fish by their gills. The gills are those openings near their eyes which open and close to help the fish to breathe. When the net is set in the water it is like a long, high fence, with diamond-shaped holes, made of strong cord. Lead

weights at the bottom hold the net far down in the water while wooden floats hold the top edge up. The fish start to swim through, find the holes are a little small, and try to back out again, only to find themselves caught and held. There they must stay until the nets are pulled up and the



Manitoba Travel and Publicity Bureau

Loading the tug

fish are taken to be prepared for sale.

Each man is allowed to set five thousand yards of net if he wishes. Tending those nets, each 160 yards long, is full-time work for anyone. Nets can be set separately or all in one long stretch. Once they are set they cannot be left long or the fish in them will spoil.

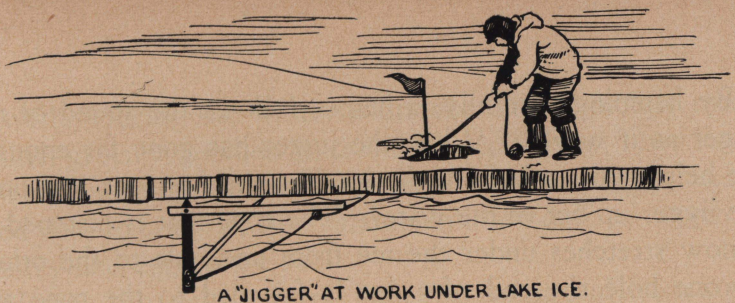
In summer the nets are marked at each end with a flag

on a large float called a *buoy*. To set a net, the fisherman throws one buoy overboard and moves his boat out into the lake, stretching the net behind him. When he comes to the other end of the net, he throws it overboard fastened to another buoy. The net is anchored to the lake bottom by weights, and flags on the buoys mark its place. Each net must be taken up, cleared of its fish, and reset every day.

Clearing the net is the work of the fisherman and his helpers. Starting at one end they pull up the net, remove the fish, and *box* the net. That is, they fold it neatly in a special *net box*. The man who boxes the net must do his job well or endless tangles will hold up the resetting. One net after another is cleared and reset until the day's catch of fish is all taken in.

Every minute counts in handling fish for it must be fresh when it reaches the customers. From the nets the fish are taken ashore where some are cleaned before being packed, while others are packed whole. Pickerel is generally *filleted*. That is, after it is cleaned and skinned, the head and tail are cut off and the two sides are cut away from the bones. In that way only the best, boneless part of the pickerel is sold.

The fish-packer gets the fish the day they are caught, weighs and packs them in fifty-pound boxes lined with wax paper. Fish are packed in layers with chipped ice between them. Fast boats carry them from Lake Winnipeg up the Red River to Selkirk and Winnipeg. A special fish express rushes the packed boxes the rest of the way south and east to market.



A "JIGGER" AT WORK UNDER LAKE ICE.

WINTER FISHING

Summer fishing is done almost as we would expect. It is winter fishing through the ice that is so strange and wonderful. Without boats but still with waterproof outer garments over warm clothing, the winter fisherman takes out a small *caboose*, or heated sleigh, and sets to work.

He uses the same nets that are used in summer fishing. Instead of a boat, he takes with him the heated sleigh, pulled by horses, if it is large, and by dogs, if it is small. Day after day he lifts, clears, and sets his nets just as regularly as in summer. The amazing part is setting the nets under all that ice.

A large hole about two feet wide is cut in the ice and marked with an anchor pole which carries a flag and holds one end of the net firmly. Down into the hole the fisherman slips a special tool, called a *jigger*, which is used to carry a rope along under the ice. This jigger is a long board which floats on the water. It is moved along by a small, steel-pointed pick that sticks up into the ice above. The pick has a heavy metal bar fastened to it, and a cord. The bar pulls down and the cord pulls up. Once the jigger is in the water under the ice, a man standing by the hole can pull the cord and let go, pull and let go. The little pick works the board along under the ice as if by magic.

By listening carefully, a helper follows the sound of the jigger as it works. When the jigger has gone far enough, the helper cuts a hole in the ice like the first one and pulls the jigger up out of the water. The rope that is fastened to it now stretches under the ice from one hole to the other. At one hole the end of a net is fastened to the rope and pulled into the water. In a short time the net is pulled through so that it stretches under the ice between the two holes. The net is all ready to catch its winter fish.

The other nets are set in the same way. When they are to be cleared, they are pulled up through one hole, cleared, and reset. The fish, which must not be allowed to freeze, are taken in the heated caboose to the packing-houses where they are treated in the same way that the summer catch was treated. Of the fish handled by Manitoba's *commercial fishermen*, as they are called, pickerel make up the largest group. Goldeye and whitefish are the most famous. Manitoba's lake-fishermen have the largest fresh-water fishing business in Canada.

BEE KEEPING

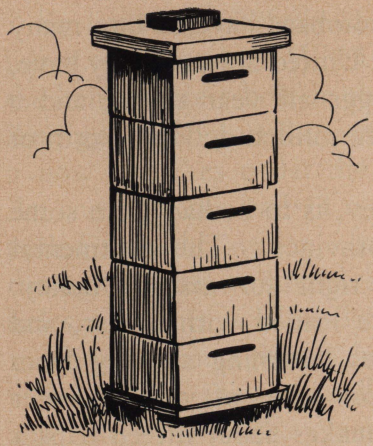
Grain, livestock, and fish—these three are important weapons in the fight against the world's hunger. There are others, too. Close to the cities, large dairies produce the milk and cream needed every day in homes, hotels, and restaurants. From market gardens each morning during the summer and autumn, carts and trucks carry fresh vegetables to be sold in the city markets or from house to house. In the southern districts several canneries are producing canned vegetables for use in the province and for shipment to eastern factories

as well. During the winter Manitobans have to buy many of their green vegetables from the United States. They have, however, enough poultry and eggs all year round, and a good deal to sell. In 1945, sixteen million dollars' worth of poultry and eggs were sold.

Honey, too, pale, creamy honey, is to be had from some 4,500 beekeepers through the province. The continental climate of the prairies is just right for making honey. Many of Manitoba's flowers are loaded with nectar, and warm, sunny days keep the bees humming steadily from flower to flower, especially across acres of yellow clover in the hay fields. A honey bee makes about fifteen trips a day, flying at a speed of from fifteen to thirty miles an hour. It will bring nectar from three or four miles away back to the hive, but generally does not need to travel so far.

Manitoba honey is light and clear, with a mild flavour. A good beekeeper can get from 100 to 150 pounds from each hive in a year. The modern hive is a square wooden box with a lid. Extra boxes or *supers* may be added just by lifting the lid of the hive and setting the new super on top of the other ones. Each super is filled with a set of wooden frames that slip in and out like drawers running up and down instead of crosswise. As the bees make their wax combs inside the frames, they fill each section of comb with honey. As soon as one set of frames has been filled, the beekeeper adds another super to the hive. Some colonies or hives of bees in a good summer will fill as many as five or six supers by the time the beekeeper is ready to take out, or *extract*, the honey in the fall.

Extracting honey is a very sticky business. Although some honey is sold in the comb in small frames, most of it must



Bee hive

be removed from the comb and put into jars or cans. The supers are taken from the hives and the frames are lifted out carefully, one at a time. Each separate frame is filled with wax comb which is in tiny cells. Each cell has a small lid of wax to keep the honey from running out.

With a sharp knife the beekeeper carefully cuts these tiny wax lids off the comb. He sets the wooden frame down inside a large metal tank that is fitted with a handle and a pair of metal fasteners to hold the frame upright on one end. When the handle is turned, the frame spins around quickly. The honey is thrown out of the comb onto the sides of the tank. Each frame is done in the same way. The honey runs down the sides and collects at the bottom of the tank. It can be drained out through a tap at the bottom, strained, and put into jars or cans ready for sale.

Many beekeepers use cans on which are stamped the keeper's name and address. Others, who have formed a company to produce honey together, use the label "Clover Crest". That label has come to mean honey that has a very fine flavour indeed. Yet Manitoba honey producers are working to get more, and even better, honey to go with your breakfast toast.

Manitobans are also trying steadily to improve their fruit crop. For a long time no one believed that much fruit could be grown in the province. Manitoba mothers still look to British Columbia, Ontario, and the United States for their fresh fruit. Yet a good deal of work has been done at the Dominion Experimental Farm at Morden to help fruit growing by men who are interested in fruit trees for their own gardens. As early as 1875 the Mennonites took wild plum trees into their gardens. Now from the southern border as far north as Swan River there are several good, small orchards. Almost one hundred and fifty of these are growing fruit for sale each year.

Manitoba is rich in wild fruits: plums, cranberries, pincherries, chokecherries, raspberries, gooseberries, and several others. These *native* fruits, as they are called, are a good beginning. They can be of use in developing others. Pollen from the blossoms of other fruit trees may be dusted onto the flowers of native trees. A branch from a good fruit-bearing tree may be *grafted* into the trunk of a native tree so that it will grow like an ordinary branch from the trunk. New kinds of trees may be brought and planted to try them in the Manitoba climate. Sometimes all three ways are used before new, better fruit can be grown.

It is slow work, for it takes time for new trees to develop and bear fruit. Each year, however, the goal seems nearer. Already many kinds of plums, crabapples, grapes, and even a few pears are being grown. "Scout" apricots, several kinds of apples, and many really good small fruits such as

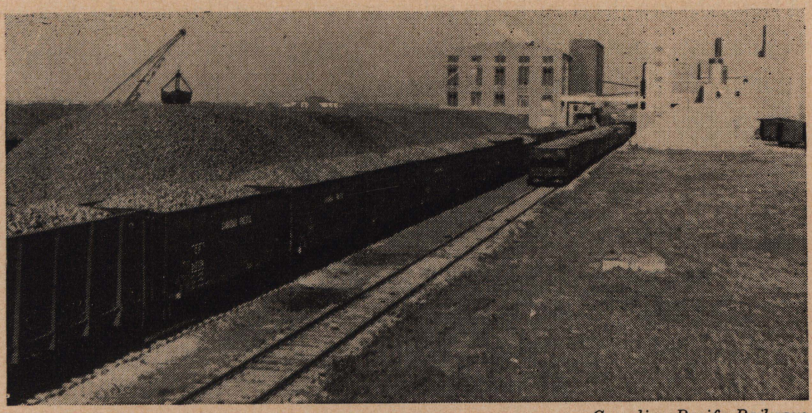
strawberries, raspberries, currants, and gooseberries, are being developed, too.

The winter climate is one of the greatest problems for fruit-growers in Manitoba. Before much fruit can be grown, it will be necessary to develop strong, hardy trees that can live through the winter frosts and still produce good quality fruit. At one time, grain was frozen in the fields or completely ruined by rust in the very spots which now are producing some of the world's finest grain. It took years of hard work and careful planning to develop the seed to grow good crops in the short prairie summer. It will take the same skilful work to produce suitable fruit trees to weather the extremes of climate.

SUGAR BEET GROWING

Only by trying to solve our problems do we learn to produce the better foods we want. Even now new crops are being tried. Sunflowers for oil, and beets for sugar have been introduced to Manitoba since 1940. Both new crops were started at a time when they were needed. Sunflowers are grown in a small section around Altona, where in 1945 an extracting plant was built to crush the seeds and drain out the oil. Sugar was started earlier, at the beginning of World War II, just in time to help Mother get enough sugar to put in her tea and coffee during the war. When sugar cane from the West Indies was hard to get, beet sugar was used to sweeten pies, cakes, and fruit. Now the new sugar refinery in Fort Garry draws beets from farms for sixty miles around. It seems well on the way to giving Manitoba a new industry.

Sugar beets are not like the red garden beets. They look more like a large white turnip. To grow sugar beets a farmer needs several implements that are different from those he uses for grain farming. He needs to do a good deal of work by hand, too, so that he needs more help for weeding and harvesting.



Canadian Pacific Railways

Sugar beets at the factory

The soil for sugar beets must be fertilized, then ploughed and harrowed before the seed is planted. The drill used for planting beets seeds only four or six rows at a time, and these rows must be eighteen inches apart. While the beets are growing they need plenty of water. They also need a good deal of weeding and cultivating between the rows. There is plenty of work to be done in the sugar beet field under the hot summer sun.

At harvest time, the beets are lifted out of the ground by a special *digger*. It can dig either one or two rows at a time depending on the size of the machine. Behind the digger come workmen who walk along the rows knocking the

soil from the beets and piling them up in long, narrow piles called *windrows*. Other workmen with short, sharp knives follow along these windrows. Holding the beet in the left hand, they cut off the top close to the beet in one swift blow. This work is called *topping* the beets. The topped beets are hauled by truck or train to the sugar factory or *refinery*. They are stacked in huge piles over sets of doors which can be easily opened to tumble the beets down long, sloping tunnels to the refinery machines.

MAKING BEET SUGAR

In the refinery the beets seem lost in the collection of tanks, pipes, and machinery. They go in one end as beets. What comes out the other end is sugar ready for use.

When the beets first come into the refinery, they are carried on long *conveyor belts* like moving tables to the *washing machines*. They are tumbled about and rubbed together until they are thoroughly cleaned before they are weighed. Then they go to a *slicer* which cuts them into thin strips. From the slicer, these strips are put into huge tanks where hot water soaks the sugar out of the beet to form a thick juice.

This juice is used to make the sugar. The rest of the beet, called the *pulp*, is saved and dried for cattle feed. The juice is emptied into another tank where lime and gas are put into it to purify it. The juice is then strained and put into huge *evaporators*. It is boiled until it becomes syrup, and boiled again until little *crystals* of sugar appear.

The machine which separates the crystals from the syrup is the most interesting of all. It is called the *centrifugal*

machine and works much like the tank for extracting honey. Inside a large tank is a big basket of fine net or mesh. The boiled syrup is poured into the basket which spins around swiftly. As the basket spins, the white sugar crystals stick to the mesh, but the syrup is thrown out through the tiny holes. It runs down the sides of the tank and is drained out at the bottom. The white sugar crystals are washed with a spray of warm water, dried with warm air, and packed into bags.

The sugar beet crop, added to the other crops, is helping the farmer of Manitoba to produce more food and to use his land in a different way. With new and different crops, not only the farmer but the manufacturer as well finds himself producing more and different foods. Many foods that Manitobans once had to get from others, they are now producing for themselves, and even sharing with their neighbours. In time, even these newest crops may join the rest on their journey to distant parts of the world.

Manufacturing

DURING the early years in Manitoba, many towns and cities grew up on the prairies as buying and selling centres for the people of the province. At first they did very little but buy the farmer's grain, livestock, eggs, and vegetables, and sell him his tools and other supplies. The things they sold had to be brought from Eastern Canada, from the United States, or from Great Britain. In time, however, many of these same towns and cities began to take on new life of their own. They began to do a little *manufacturing*.

The early settlers used their heads and their hands to help them make many of the things they needed. In the same way, modern Manitobans have come to produce many building materials, clothes, and other supplies which they need for their use. Manitoba's manufacturing has grown rapidly, particularly in the last ten years. If it should grow as quickly in the next ten years, Manitobans may find themselves producing manufactured goods for sale, goods they once had to buy from others.

Manufacturing requires four important things: *raw material*, *labour*, *power*, and *capital*. *Raw material* means the grain, or cream, or clay, or cloth, which is needed to make something else. Wheat is the raw material for flour, cream is the raw material for butter, clay is the raw material for bricks, and so on. Besides raw material *labour* is needed.

Labour means the men and women to work in the mills, or creameries, or factories, *Power* is also necessary. It might be coal to keep furnaces or ovens hot, or electricity to give light and run special machines. The fourth thing needed is *capital*, or money. It takes money to buy raw material, money to pay the men and women for their work, and money to pay for the coal or electricity.

These four important things the people of Manitoba needed before they could do any manufacturing. They came slowly at first and they did not all come together. In some places there would be raw material and labour, but no power and no money. In other places there was raw material and money, but no labour and not enough power. Only gradually did Manitoba's manufacturing industries get started. They came from small beginnings over a period of many years.

At first the people of Manitoba used the raw material already near at hand, such as grain, livestock, and clay. Then, for other industries, they brought raw materials from other places, such as iron and steel and different kinds of cloth. The flood of settlers had brought many men and women who were skilful, experienced workers. After a while, Manitoba started to develop electricity for power.

Meanwhile, a few men had started in small workshops with perhaps one or two machines and a helper. Slowly they earned enough money to build larger and larger factories, to buy new and better machinery, and to pay more skilled workers. It took time, many years of work, and careful planning. The work and the dreams of many different people in many wide-spread places built the industries the province has to-day.

First in importance among the manufacturing industries, of course, is the manufacturing of different foods. Many kinds of food must be processed after they leave the farm. Meat, flour, bread, butter, cheese, sugar—all these foods must be "manufactured" from the "raw material" that comes from the farm. That raw material is changed a great deal to produce the food that appears on your dinner table or in your lunch box at school.

Meat-packing, at the large packing-plants in St. Boniface, Winnipeg, and Brandon, is the largest of Manitoba's manufacturing industries. Second comes the dairy industry which produces butter, cheese, and ice cream, from over seventy dairies and creameries. Flour-milling, at thirty-one mills in both city and town, produces ten thousand barrels of flour a day and many kinds of cereals. Sugar is refined at Fort Garry, just south of Winnipeg.

At Neepawa, about eighty tons of salt a day are produced by drying up, or *evaporating*, a strong salt *brine* that is pumped up out of the earth through heavy pipes. There are many factories making bread, biscuits, and cakes, as well as candy. Almost every district has its bakery. Several canneries, too, are manufacturing canned corn, peas, beets, carrots, and other vegetables, while pickling factories take many tons of cucumbers, cauliflower, and tomatoes. The list of "manufactured foods" is longer every year.

Yet these smaller food factories are less important than many factories and workshops that are producing other manufactured goods. At many points in southern and western Manitoba there are factories making different kinds of building supplies.

Most of the building materials manufactured within the province are those which can be made from Manitoba's large supply of limestone, gypsum rock, and clay. At Inwood, Stonewall, Steep Rock, and Moosehorn, there are *lime quarries*. *Quarries* are open pits where thick layers of gray rock called *limestone* are cut into large blocks by drilling or blasting. When this limestone is heated for several days, it changes into white lime.

Huge furnaces, called *lime kilns*, are used to manufacture lime. The kilns are made of stone with two parts, one above the other. In the lower part, a hot fire is kept burning steadily. Through an opening in the top, blocks of gray limestone are dumped into the upper part and left to heat for several days. As the bottom layers of stone are changed to lime, they are taken out through a door in the side of the oven. The lime made in this way is used with sand to make the mortar used in building brick walls and chimneys. It is used, too, with sand and horsehair to plaster walls, and with clay and *gypsum* to make cement.

Gypsum, from Amaranth and Gypsumville, is much like lime but softer and whiter. Like limestone, the hard gypsum has to be heated. Then it must be crushed between rollers and sifted. It makes a very fine, white powder called *Plaster of Paris*. Sticks of pressed gypsum are what we use as "chalk" on school blackboards. The same material can be pressed between layers of heavy paper to make the "gyproc lath" and large sheets of "wallboard" now used for inside walls of many new homes.

CEMENT

Cement is made in a large factory at Fort Whyte where the clay that is used with the lime and gypsum is taken from a large clay pit just west of the buildings. Limestone blocks are broken and crushed, a few at a time, by a large ball of iron working in a bowl-shaped crusher of steel. Huge rollers grind the crushed rock again until it is a fine powder. The powdered lime is then mixed with gypsum and clay which have also been ground to a fine powder.

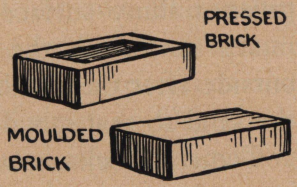
The three powders, mixed together, are put into a long, gently sloping pipe or tube. Put in at the upper end, they slowly work their way down as the pipe keeps revolving to mix them more thoroughly. A furnace near the lower end heats the mixed powder and changes it into hot, glowing clinkers like the ones in your furnace ashes at home. These clinkers are emptied out of the pipe and cooled before they are crushed between more heavy rollers. The fine, gray powder which comes from these rollers is *cement* ready to be shipped for sale in heavy paper bags.

BRICKS AND TILE

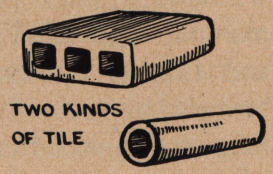
Clay is used for the making of other building materials, such as brick and tile. From Morden comes a special clay, called *bentonite*, which is used in refining oils and gasoline and for making fire brick. Manitoba has brick yards at Whitemouth, Portage la Prairie, Edrans, and West Kildonan, producing several kinds of brick and tile. White clay, in which there is some lime, makes a white or cream-

coloured brick. Red brick is made from clay that is reddish in colour because in it there is a small amount of iron ore.

There are two ways of making brick, one by *moulding* and the other by *pressing*. Clay is dug from an open pit and any large stones removed. It is crushed and ground between heavy rollers to make a powder which is mixed with water to form a thick dough. For *pressed brick*, this dough is put into moulds and pressed down tight by a heavy weight. Pressed brick generally has a small hollow in the top. For *moulded brick*, the dough is pushed through a small hole four inches wide and two inches high. It comes out like a long, soft strip of dough onto a table. On a set of small rollers, it is moved along until it rests under a set of five wire cutters. With one stroke of these cutters, a workman cuts off four pieces, or bricks, at a time. Each one is exactly eight inches long.



The soft bricks must be moved carefully on flat wheelbarrows to long drying sheds. They are placed on shelves where air may reach them easily but where they are protected from sun and rain. After being dried for a few days, they are baked in a long, outdoor oven or *kiln*. The bricks are stacked not too closely so that the hot air may go around them freely. The fires are then lit in the lower part of the kiln. They are kept burning for several days before they are allowed to go out slowly. The hard baked bricks are removed to cool ready for use.



Tile is made in the same way as moulded brick, except

that the shape of the moulding hole is different. For tile the hole may be round or square with a *core* in the middle to make the hollow centre of the tile. The dough comes out onto the cutting table as a long tube to be cut in pieces as the bricks were cut. Often tile, and even some brick is given a shiny surface. To do this, the brickmaker either mixes sand with the dough or dusts a little sand on the outside after the moulding. The heat of the kiln later melts the sand so that it will harden into a gleaming polish.

Cement blocks, too, and cinder brick, made from cinders set with cement, are being supplied from several factories. If something better is wanted, Garson and Tyndall have their stone quarries. There, a very fine limestone is cut in blocks, trimmed, and polished for use in large buildings. Since this stone was first used over a hundred years ago to build Lower Fort Garry, it has become famous for its hard surface and beautiful colouring. Of all Manitoba's building materials, her Tyndall stone is most widely known.

These many kinds of building supplies are all produced within the province. Lumber finishings, such as doors, windows, frames, plywood, and special trimmings, are also manufactured at Winnipeg, Brandon, Flin Flon, Steinbach, and Lorette. Most of the lumber used for building is brought by train from the mills of British Columbia. As long as Manitoba can get such fine lumber from the mills of the West Coast, she will probably leave her own smaller forests almost untouched. The mills which are working produce some lumber, but the largest part of their timber is made into railway ties, laths, and boxwood. Near Pine Falls, spruce wood is cut and hauled out to the Winnipeg River for making paper.

One of the oldest of Manitoba's manufacturing industries is her iron and steel work which is carried on at Winnipeg and Selkirk. Since she has no iron of her own, she makes use of a good deal of "scrap" iron and steel. This "scrap" metal, instead of being wasted, is ground into pieces and melted down to be used again for new articles. Other raw materials are brought in by rail. A special sand for moulding comes from the South. Many sheets and bars of new steel are brought from the large iron and steel plants of the United States and Eastern Canada.

Iron is taken from its ore by heating it together with coke and limestone in a huge *blast furnace*. Steel is made by melting the iron and mixing with it carbon, or nickel, or other metals. When hot steel is cooled quickly, it becomes very hard. When it is cooled slowly, it is soft enough to be worked or rolled into thin sheets or bars. In Manitoba, rolled steel bars are produced at Selkirk in a factory known as a *rolling mill*.

When steel is to be rolled, the hot, liquid metal is taken from the furnace in ladles and emptied into tall, narrow tanks called *ingot moulds*. Once the steel has cooled enough to become solid, it may be taken from the moulds by cranes and rolled again and again until it becomes a flat sheet of metal. If it is to become a bar, it is simply turned on its edge after each rolling. The rolling and turning slowly stretches the hot metal into a long, thick bar or beam of steel that looks like a glowing, red plank. This bar can be cut into lengths. It can be trimmed, too, by

special planes which cut off thin shavings as a carpenter's plane trims wood. Holes can be cut for riveting the beams together. In this way, heavy bridge steel and building steel bars, or "girders", are manufactured.

Since the Selkirk mill can supply only a small part of the rolled steel needed in the West, a great many bars are brought in from large plants. These bars are then trimmed and finished in Manitoba workshops. Sheet steel is also brought from the East and the South for use in the making of boilers, tanks, and large mine elevators.

CASTINGS

Another kind of metal work is done, too, in several Manitoba shops which are known as *foundries*. This work is known as *casting*, and in casting, all the work is done within the province. Everyone has seen jelly made into different moulds. Hot, liquid metal can be moulded in much the same way. The metal to be used is melted to a liquid. The pattern of the article that is to be cast is carved out of wood and used to make the shape in special sand held in a *moulding box*. This moulding box is in two parts which fit closely together, the top part upside down like a lid. Some smaller patterns fit into the lower part only. In such cases the liquid metal is poured into the open mould. Other patterns need both parts. Then the metal is poured through a small hole in the top part of the box.

A hollow article, such as a bronze vase, can be made hollow in the centre by putting into the mould a hard sand "core", which is held in place by metal pegs. The liquid metal, when it flows into the space left between the outside

mould and the core, is hot enough to melt the pegs which become part of the vase. When the metal has cooled and become hard, the sand and boxes are cleared away and the sand of the core taken out.

Both rolled metal and cast metal products are manufactured in Manitoba. Some are as small as nuts and bolts; others are as large as heavy steel girders and large drums weighing five tons. With her "scrap" metal and the raw materials brought from other places, Manitoba's iron and steel workers supply large numbers of metal parts for railway cars and locomotives produced by Weston and Transcona workshops. They manufacture girders and beams for bridge work and large buildings, machinery for hundreds of prairie grain elevators, and a good deal of mining equipment for Manitoba and Western Ontario mines. In the last few years, metal goods manufactured in Manitoba foundries have been shipped for use in the mines of South Africa.

CLOTHING

Perhaps one of Manitoba's largest industries, apart from the food processers, is Winnipeg's new clothing business. A few years ago it was almost unnoticed, but it has been growing steadily. Already it is supplying over thirty million dollars' worth of clothing per year to Canadians living west of the Great Lakes.

The clothing industry, in one way, is much like the steel industry. That is, except for the fine furs from the North, used by the furriers of the city, it has to bring from the East and the South all its raw materials, both cloth and

thread. No cotton, linen, silk, or rayon is produced here. The wool that is handled in Manitoba's woollen mills at Little Britain, Brandon, and Sifton, goes into blankets, "comforters", and heavy motor rugs.

Yet a really large industry is growing, helped by the excellent railway service it has both east and west. Winnipeg's early experience in handling clothing brought from Eastern Canada and the United States has given the industry a good beginning. Some skilled workers, who had experience in the manufacturing of clothing, arrived with the other new settlers. Other workers have been trained by them. With good management and planning, manufacturers bought, a few at a time, the machines needed for cutting, sewing, knitting, and pressing. Year after year, Manitoba clothing firms have been supplying larger and larger amounts of clothing to the people of the Canadian West.

The manufacturing of clothing from wool, silk, cotton, or rayon, does not take so much time as the making of fur coats. Yet it does demand the best work of many men and women with quick and clever fingers. There are designers, cutters, seamstresses, finishers, and pressers. Although modern machines are used to do much of the work quickly and easily, skilled workers are needed to handle those machines. Much of the fitting and finishing, too, especially on finer clothing, must be done carefully by hand.

The style of each shirt, dress, or coat, is decided by the *designer*, who knows how the finished garment should look if it is to please the buyer. Once the style of a garment is set, many hundreds of garments may be made in different sizes and colours for that one *line*, as it is called. The patterns for the many pieces of cloth that are needed to

make up the garment are given to a *cutter* who works at a long table.

The *cutter* uses a special cutting machine which does not look in the least like Mother's ordinary scissors. It is a very sharp knife, run by an electric motor, which can cut out sleeves for a dozen different shirts at once. The cutter simply places the different layers of cloth one on top of the other, lays the pattern on the top layer, and goes to work. Holding the knife straight up and down so that it cuts all the layers of cloth evenly, the cutter traces around the pattern. Each piece of the shirt pattern is done in the same way. The thick piles of sleeves, backs, fronts, collars, cuffs, and other pieces are laid out together ready to be sewn.

Each *seamstress* has her own sewing machine and one part of the sewing on each shirt to do. One seamstress will do the side seams, one will do the sleeves, and so on. The garments are passed along from one to the other. Step by step the pieces are fitted together until the whole shirt is completed.

It takes both speed and skill for each worker to keep up with the others in the long line of workers. Each one must know exactly what is to be done and do that one job quickly and correctly. The most difficult parts of the work, such as setting in pockets and fitting collars, are done by the most skilful workers. The *finishers* do the last touches by hand. Buttons, hooks or fasteners are sewn on, button holes are made, and embroidery or other trimmings are added. The finished garments are checked carefully and pressed. They are sent to the factory "stock room" for storage until they are sold.

Each factory has its display room where buyers may come to see samples of different styles and colours of garments that they make. At first, Manitoba manufacturers made only work clothes. Later, many kinds of winter and summer sports clothes were made. Now work clothes, sports wear, and dresses are all being produced by the city's many factories. One or two western designers are becoming well-known across Canada, both east and west, for their sports clothes particularly. Certainly this young industry is growing by leaps and bounds.

FURNITURE

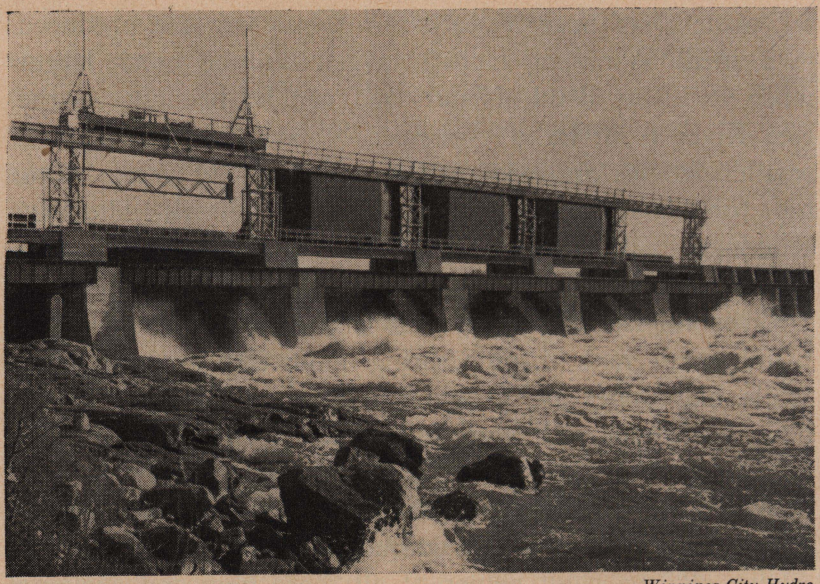
To the growing list of Manitoba products should be added furniture which is being made, not only in the older and larger factories of the city, but also in many new, small factories and workshops in both the cities and towns. For many years the older furniture makers have been producing metal beds, bedsprings, and mattresses, along with some other furniture. Now many new factories have started to grow. All kinds of furniture, from cabinets and cedar chests to kitchen furniture and even upholstered chairs and chesterfields, are now being made. There are furniture makers in Winnipeg, Brandon, Dauphin, Winkler, and Winnipegosis.

There are many other smaller factories producing articles such as brushes, plastics, toys, auto seat covers, light fixtures, bee-keepers' supplies, and even snow planes. Plaster figurines are made at Winnipeg and at Steinbach. Many styles of felt and straw hats, and cloth and leather gloves, are made in Winnipeg. Work boots and heavy sports shoes

are made from heavier leathers. Glass jars are produced in a small Winnipeg factory which will be much larger when excellent Black Island sand can be brought up the Red River from Lake Winnipeg. Sheet metal tanks and smaller articles are made at several points. Fishing boats, too, for lake fishermen are produced at Selkirk, The Pas, Kildonan, and Winnipegosis, while canoes and plywood pleasure boats come from Winnipeg, Kildonan, and The Pas.

Over almost the whole south and west of the province, many small new manufacturing industries are appearing while older ones are growing and spreading out. These new workshops and factories promise well for the future. Scientists are at work looking for new information to help them. They are trying to discover new ways to use the resources that are now left untouched or are simply wasted. Above all, the chief helper of all these new and growing factories is the Manitoba Government with its plans to bring electric power to every farm and town in the province.

Even before World War II, plans were laid for a network of lines to carry electricity to the thousands of Manitobans who wanted it. Since the war's end, those plans have gone ahead rapidly. In the spring of 1948 the Manitoba Government decided to take over all the electric power of the province, to develop it as fully and as rapidly as it was needed. Manitoba's development of manufacturing industries and her plans for her electric power go hand in hand.



Winnipeg City Hydro

Sluice gates at Slave Falls

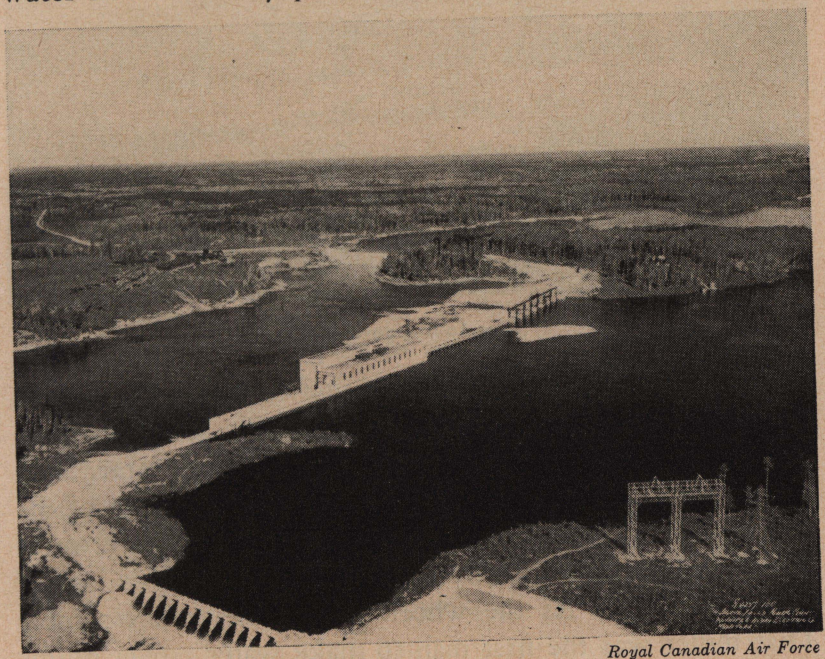
Chapter VIII

White Coal

MAN has found an almost magic power in the waters of swiftly-flowing rivers. That power can give us light to read our book, heat to cook our dinner, and power to sew a dress or wash and iron a shirt. It can turn the wheels of large machines. It can help to change tall spruce trees to the thinnest of paper. It can melt strong iron and steel to a glowing, white-hot liquid. It can help to take copper and zinc, gold and silver, from the rock in which they are found. We call that power *electricity* or "*white coal*".

When Mother Nature was scattering her gifts across the world, she put no black coal into Manitoba's storehouse of natural resources. She gave her rich soil for farming, mile after mile of forest, great stores of hidden minerals, and lakes teeming with fish. She even put down for her some of the finest building stone in all Canada. Yet there was no black coal. In its place she put an extra large supply of her most precious mineral of all, water. There is water for crops, for animals, for people, water for all living things, and water for power.

As it makes its way to the lakes or to Hudson Bay, the water flows in many places down steep slopes over jagged



Royal Canadian Air Force

Slave Falls Power Plant

rocks that form boiling rapids. The rushing, mighty force of those rapids can be turned to power. In the swift waters of the Nelson, the Churchill, the Saskatchewan, the Dauphin, and Winnipeg Rivers, lies the strength of six million horses waiting to be harnessed and put to work.

It took men a long time to learn how to harness those horses. A start was made many years ago in Europe when

Winnipeg City Hydro

Slave Falls undeveloped

one day a clever miller thought that it would be a good idea to build his mill beside a stream. He made a water-wheel with wooden paddles on its rim. The water, as it flowed past, was caught by the paddles. The force of the water pushing against those paddles made the wheel turn. The wheel was fastened by a long bar to heavy grindstones inside the mill. As the wheel turned, the stones turned. That miller was the first man to make water power do his work for him.

Later, other men, who were interested in magnets, discovered that by turning a magnet around and around inside a coil of wire they could produce a current of electricity. Still other men found that fine metal brushes, if they were connected to copper wires, would collect and send that electricity to any place where it could be used. In time, someone else thought of putting all these ideas and machines together to turn water power into electric power.

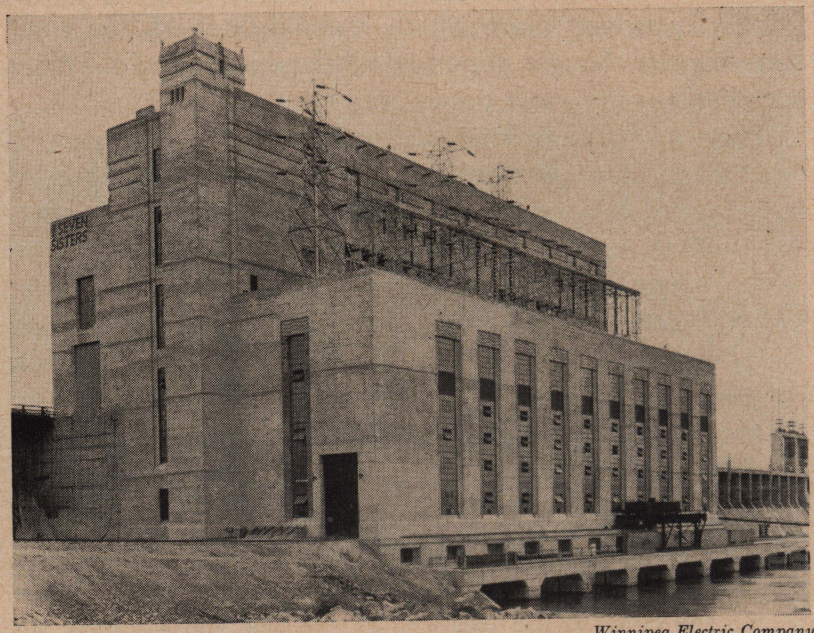
That is what was done, and that is what is done now in Manitoba's many *powerhouses*. Our scientists and engineers have learned to develop electricity from the power of waterfalls and to send it on cables to cities, towns, and farms where it can be used to do men's work. In Manitoba there are no very high falls such as there are in the Niagara River, but there is a good flow of water over many low falls or rapids which can be used to develop electricity.

MAKING ELECTRICITY

To change water power into electric power at these rapids, the engineer must first build a dam and a powerhouse across the river in the path of the rushing water. Both the dam and the powerhouse are built of solid concrete and steel set firmly on the hard rock of the river bottom. The dam holds back the water and collects it in a small lake. Then the water is sent pouring down at a terrific speed through wide, sloping pipes, called *flumes*, into the powerhouse. There the machines needed to develop electricity are ready to go to work for mankind.

The powerhouse itself has two parts, a lower and an upper floor, or level. It is on the lower level that the water

runs down through the building and out on the other side. At the lower end of each flume lies a huge waterwheel called a *turbine*. It is shaped something like the wheel part of a toy windmill but is made of steel. As the water rushes down the flume, it strikes against the turbine, sending



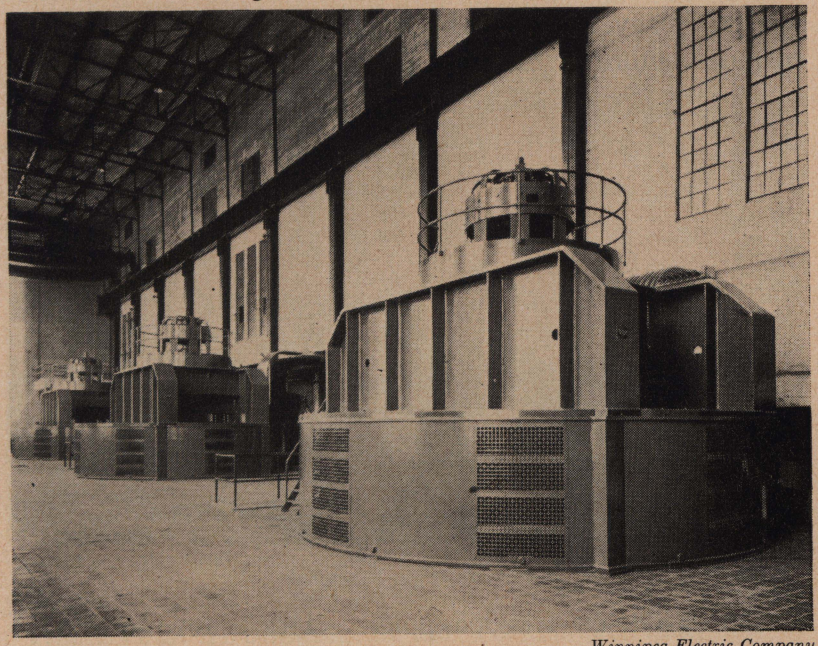
Winnipeg Electric Company

Seven Sisters Falls Power Plant

it whirling around very swiftly. The turbine acts like the waterwheel of the old mill. It is connected to another machine on the upper level of the powerhouse. As the turbine whirls around, it drives this machine up above.

The machine in the upper part of the powerhouse is called a *generator* because it is the machine which develops or *generates* the electricity. The outside covering of the generator is a strong metal case which encloses several

large magnets set inside wire coils. Close to these are fine wire brushes connected by copper wire to strong cables that lead outside and up to the top of the powerhouse. As the turbine down below whirls around, it sets the magnets and coils of the generator to work. Each flume has a



Winnipeg Electric Company

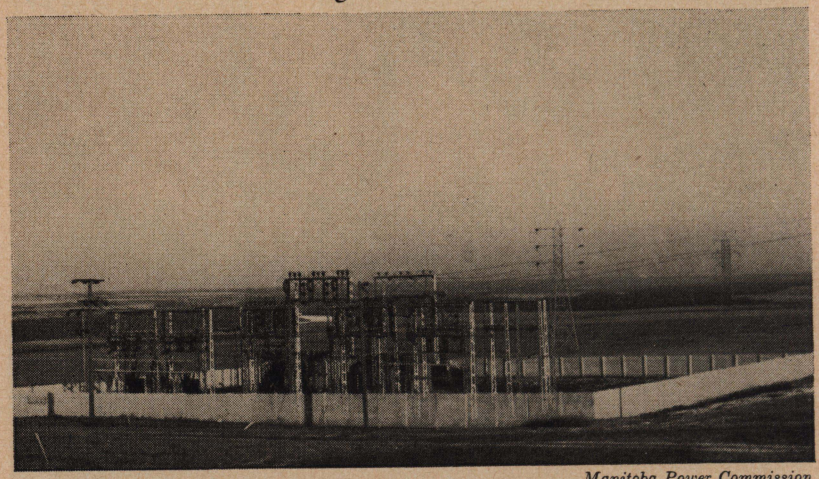
Generators at Seven Sisters Falls

turbine and each turbine drives a generator. With the power of the water pouring through the flumes night and day, a long line of generators is kept working busily. The power of the water is changed to electricity.

The electricity, as it is developed in the generator, is collected by the wire brushes and carried out along the wires to the cables. These cables, strung from the power-

house on tall, steel towers, carry the electricity away and out across mile after mile of forest, rock, and plain.

Those tall, steel towers march out across the country like so many giants in seven league boots carrying their load of light, heat, and power. Their load is dangerous as well as heavy. It must be changed or *reduced* to smaller currents before it can go out from the tall towers over



Manitoba Power Commission

Brandon Power Substation

smaller wires on wooden poles. The heavy current of the main stream is broken up to travel in smaller streams over a network of wires, north, south, east, and west. Over wires no thicker than heavy cord, the force of water that may be hundreds of miles away can send a very clever servant to your door.

One powerhouse has been built on Island Lake River north-east of Lake Winnipeg, and one on the Churchill River just over the border in Saskatchewan. There are five powerhouses on the Winnipeg River, and two more are

being planned. From those already built, electricity flows in a steady stream across rugged rocks and level plains, through tall forests and along busy city streets.

To farms and city homes, to offices and factories, to flour mills and paper mills, to iron foundries, down hundreds of feet into mines, goes the power of "white coal". In many places and for many jobs where no other power could help so well, "white coal" works for man. Let us try to discover in what different ways it works:

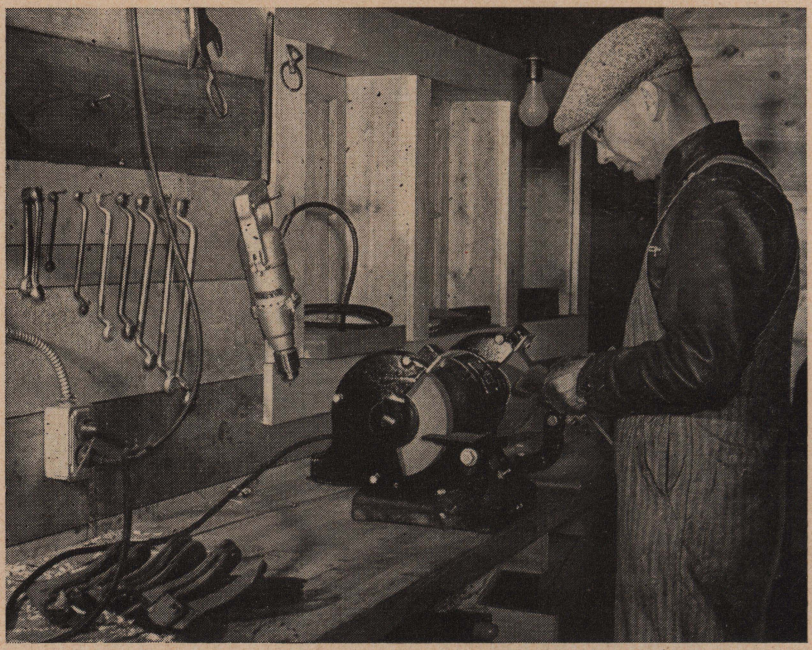
USES OF ELECTRICITY

All over the province electricity works in people's homes. It provides light for lamps, heat for stoves, and power for washing and sewing machines. Not so many years ago, men did not believe it was possible to give every home electricity. To-day the people of Manitoba are working to bring it to every home whether large or small, and especially to homes far from towns and cities. Many people on Manitoba farms already have the "Hydro" power, as they call it. Many more are to get it in the next few years. "White coal" is bringing all the work-saving machines of the city to the country home-maker. It can be a very welcome servant for her.

If electricity can light the farm home, it can light the barns as well, and the poultry houses. It can heat the "brooders" to make warm pens for young chickens, turkeys, and pigs. It can turn the motors for saws, grain crushers, water pumps, milking machines and cream separators. Three cents' worth of power will saw a cord of wood in a few minutes. Ten cows can be milked night and morning

for the price of three chocolate bars. Electric motors and tools in the workshop make repairing and building quicker and easier. The farmer's work on "chores" can be cut almost in two with the help of electricity.

The same kind of help is given to other busy "hunger fighters". The power that heats an iron or toaster can boil

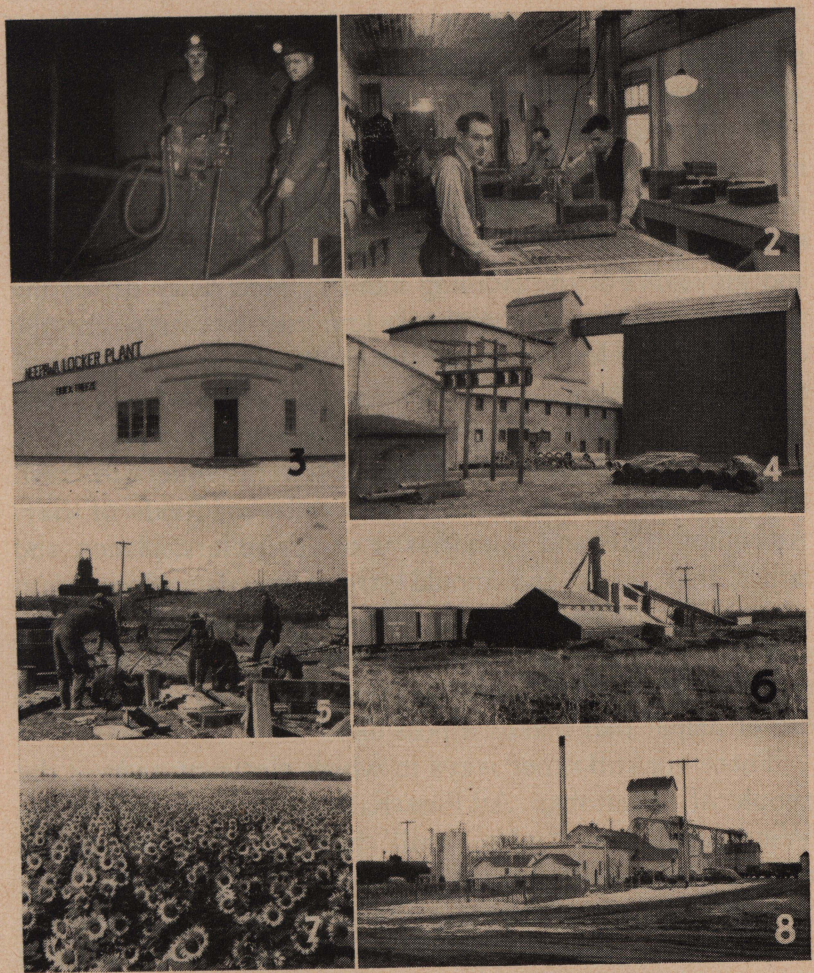


Manitoba Power Commission

Electric Power on the Farm

the juice of shredded beets in a factory to produce sugar. The power that cools the refrigerator at home does the same for storage rooms in meat-packing plants, creameries, and quick-freeze lockers. The power that turns a washing machine for Mother crushes the seeds of sunflowers to make vegetable oil at Altona. It helps to produce oatmeal from

USES OF ELECTRICITY



1. Diamond Drilling underground
2. Manufacturing
3. Neepawa Locker Plant
4. Winkler Milling Co.
5. Capping a shaft, Flin Flon
6. Morden Bentonite Plant
7. Sunflowers for Altona Plant
8. Vegetable Oil Plant, Altona

oats, and macaroni from durum wheat, in St. Boniface and Winnipeg. In flour mills, large and small, in many parts of the province, electric power is now being used to drive the rollers and sifters that turn out spotless, white flour.

In other factories, too, "white coal" aids men and women in their work. It turns the wheels of machines that produce many kinds of manufactured goods: fur coats and overalls, sports shirts and work shirts, hats and woollen goods, shoes and gloves. For the clothing industry electricity drives the machines that wind the wool, knit the sweaters, cut the cloth, trim the leather, stitch the shoes, and sew the dresses, coats, and overalls. For cabinet makers' workshops and furniture factories, electricity runs power saws and lathes. At brickyards and cement factories it turns rollers to crush and grind limestone, gypsum, and different kinds of clay. At rolling mills and foundries it drives rollers, planes, and lathes that work and mould strong metals. Some day, perhaps not too far away, Manitoba's manufacturing of many different articles will be as important as her work of hunger fighting. When that day comes, electricity will be the clever helper that makes it possible.

There are still other ways in which electricity serves the people of Manitoba. At Pine Falls near the mouth of the Winnipeg River, "white coal" helps to turn tall spruce trees into the newspaper which most of us read every day. Spruce logs from trees cut in the woods near by are hauled out to the mill and stripped of their bark. They are piled in a huge stack almost as high as the paper mill itself. When they are to be used, they are fed into the mill on long chains, run by electricity, which carry them right to the top of the plant. As they are being changed from

ordinary logs to fine paper, they slowly move down until the finished paper is put into the storage and shipping room on the ground floor.

When the logs first go into the mill, they are put into the *chipper*. Here, electric power drives the knives which cut and chip the logs into fine bits. These bits are soaked until they form a soft, wet *mash* that looks much like wet "Cream of Wheat". Electricity runs the wide, screen belts which carry this mash to the rollers. Day after day, these rollers, driven by electricity, too, press and squeeze the soft mash. First it becomes a thick mat something like blotting paper. Then it is rolled again until it becomes a thin, white carpet of the paper which we call *newsprint*. Huge rolls of the finished paper are so heavy that they must be handled on small, powerful trucks. Those rolls are ready for a quick trip to some printing office to become Father's newspaper or your favourite comic strip.

The same power that helps to make paper at Pine Falls melts iron and steel in a large electric furnace at Winnipeg. For heating their metals, Manitoba foundries use the *open hearth furnace*. This kind of furnace is not kept heated week after week, year after year, as are the giant *blast furnaces* of the South and East. The *open hearth furnace* is allowed to cool after each "heat", as it is called. Firing with ordinary black coal, the foundry men require many hours of hard work to get the terrific heat needed to soften metal. Steady work is needed, too, to keep up that heat once it has been reached. With the electric furnace, this constant work is unnecessary and the furnace can be heated in a shorter time. Then, too, with the steady, high temperature produced and kept up by "white coal", many articles

of different kinds of steel, such as stainless steel, can now be made in the West.

Last of all, but perhaps the most important, is the work that electricity is doing in Manitoba's Northland. There it is helping to remove copper and zinc, gold and silver, from the rock or *ore* in which they are found. Indeed, if it were not for the gift of water power to develop electricity, many of Manitoba's mines would perhaps not have been started.

God's Lake Gold Mine, Gunnar Gold Mine, the San Antonio Mines, all those mines north and east of Lake

National Film Board

The Town of Flin Flon

Winnipeg use "white coal" for their power. There are no railways to carry black coal within miles of them. Mail and some food are carried in by aeroplane. Most of the food and supplies needed are taken in by tractor train over frozen lakes and marshes during the cold months of winter. The power that helps to mine the ore, crush it, and take from it the precious metals, is none other than electricity carried over rock and through forest from Island Lake River and the Winnipeg River.

Even though black coal is brought in by railway to the huge furnaces at Flin Flon, most of the work in both the Flin Flon and the Sherridon mines is carried on with the help of electricity from the Churchill River. Down a deep well, called a *shaft*, sixty men at a time are lowered into Flin Flon Mine in a large elevator or *cage* that is run by electricity. On seven different *levels* that look like long, gloomy hallways in the inky blackness of the earth, men work with electricity. Even on the lowest level, four thousand feet underground, electric fans bring in fresh air for the miners, from the open air above. Electric drills guided by strong hands bite into the ore that holds the metals man wants.

Along these levels, too, run fourteen electric locomotives pulling cars filled with ore to a large electric crusher which is kept working steadily deep down in the earth. If repairs are needed in any part of the mine, a machine shop with electric tools is there to do the repairing. Even the big bins that carry the crushed ore up out of the mine are run by electric power.

Near the top of the mine shaft are many large buildings where the metals are taken out of the ore. Although the

big *smelting furnaces* use black coal, even here "white coal" is busily at work. An electric train carries ore from the mine bins to one building where a heavy *surface crusher* grinds the rock into a powder as fine as flour. In another building, the powder is mixed with water and treated with chemicals to separate the copper ore from the zinc ore and the gold and silver ores. In a third building the gold and silver are taken out of their ores by chemicals. In one smelting furnace, copper ore is roasted and melted until copper runs out in a liquid into moulds where it hardens in large bars. In another smelter, the zinc ore is roasted and put into large tanks. It is treated with a current of electricity to make the zinc cling to large sheets of aluminum inside the tanks. Once the zinc is collected in this way, it can be scraped off and prepared for sale.

Since 1920 many mines have been started in northern and eastern Manitoba. Of them all, Flin Flon is the largest. It has already been marked as one of the richest and largest "base" metal mines in the world. Who knows but what there are many more rich beds of ore still undiscovered in that rocky forest land?

In Manitoba mining, electricity is the magic power that has helped to open up riches undreamed of in the days of the early pioneers. Mining could truly be called the youngest of Manitoba's family of industries. Yet it has grown to be such a large one in such a short time that no one thinks of it as being so young now. Mining in Manitoba's Northland is taking an important place beside the mining of other Canadian provinces. Yet the amazing thing about it is that so much work has been done, not in the old ways, but with electricity.

It is "white coal" that has made such work in the North possible, just as "white coal" has given the towns and cities of the South power for many kinds of manufacturing. At one time Manitoba was the home of the Indian and the fur trader. It became later the home of the farmer and fisherman. Now it has become also the home of the miner and manufacturer. Abundant water power is the key to many of this province's growing industries. For much important work in her farming, her manufacturing, and her mining, Manitoba's most valuable servant is her "white coal".

Manitoba Travel and Publicity Bureau

Clear Lake

Manitoba Travel and Publicity Bureau

Silver Falls, Winnipeg River

Playgrounds of Manitoba

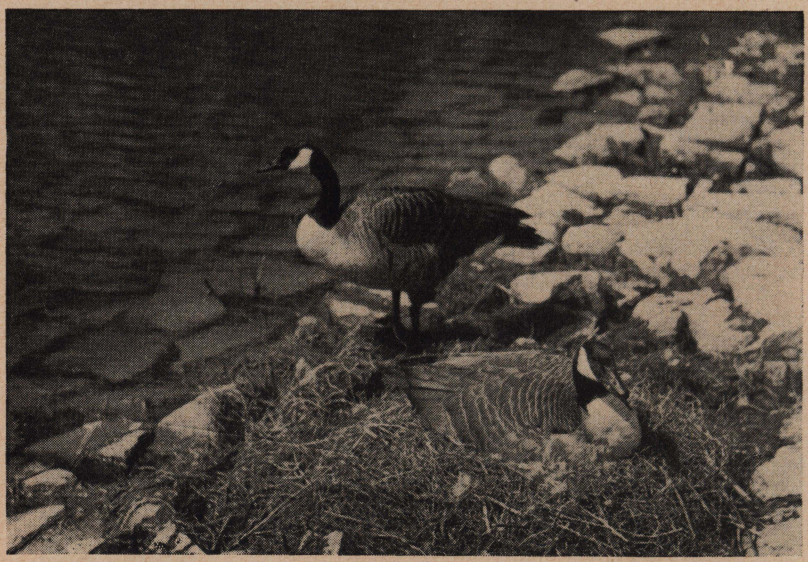
WITHIN Manitoba's boundaries almost 760,000 people work hard to do their share in the building of Canada. Manitoba's climate gives her men and women the energy needed for their work. It also gives them energy for sports of all kinds.

Summer brings many different sports: golf, tennis, baseball, swimming, boating, fishing, and later, rugby. In winter even the smallest boys and girls get out their ice skates, skis, and hockey sticks. This province is one of the greatest hockey schools in the world, producing a very large number of professional hockey players. Those who like curling find plenty of action, too, for Manitoba is the Canadian home of curling. Every February it holds the largest "Bonspiel" in the Dominion and it boasts of many world championships.

If winter holds few fears for the Manitoban, certainly the summers hold none. Men, women, and children alike enjoy their sports all over the province. They enjoy outdoor fun themselves and invite friends and neighbours from near and far to join their many activities.

Of Manitoba's playgrounds, the best-known is Riding Mountain National Park just south of Dauphin. Rising high above the prairies are over a thousand square miles of wooded hills dotted with small, clear lakes of deep blue. Second only to the famous Jasper Park for popularity,

Riding Mountain Park has camping grounds, many cottages, and a comfortable hotel. Beautiful highways wind through tall evergreen forests. Elk, buffalo, deer, bear, and beaver enjoy these woods untouched by hunters. One of the largest elk herds in Canada finds a safe home there, not far from one of the finest golf courses in the West.



Ducks Unlimited

Canada Geese

Three hundred miles south-east another kind of playground spreads over mile after mile of unspoiled forestland. There the hunter, fisherman, or "just plain camper" may follow a lovely chain of quiet lakes between rocky shores and wooded hills. He may tramp through woods where deer, moose, and bear go a-roaming. Or he may dip his paddle into swiftly flowing streams where trout, black bass, pickerel, and pike are ready to fight his hook. There is

many a thrill in this Whiteshell Forest Reserve, if the hunter or fisherman is only clever enough!

Campers who wish to rest, swim, or sail, may enjoy the wide, white, sandy beaches and broad waters of Lake Winnipeg. At Winnipeg Beach, Grand Beach, Victoria Beach, and others, warm, shallow water makes safe paddling

Canadian National Railways

White Whaling, Churchill

for tiny tots. All through the province smaller lakes such as Lake Manitoba, Lake Winnipegosis, Lake Killarney, Shoal Lake, and Clearwater Lake, are beauty spots from early spring to late fall. Manitobans make the best of their summer months. Thousands flock to "summer resorts", as they are called, every year.

The hunter or fisherman who wants real holiday pleasure will probably want to try a less crowded spot, some wood

or lake where he can feel he has a better chance for adventure. He will choose his holiday time to suit the season for his favourite sport. Whatever and whenever he chooses, Manitoba has a spot for him. The hunter may take his choice of marshes for ducks, or grain fields for prairie chicken, partridge, and pheasant. He may go north near The Pas for Canada geese, or to Duck and Porcupine Mountains for deer, moose, and bear. Even farther north across rock and muskeg, he may hunt the swift barren-land caribou.

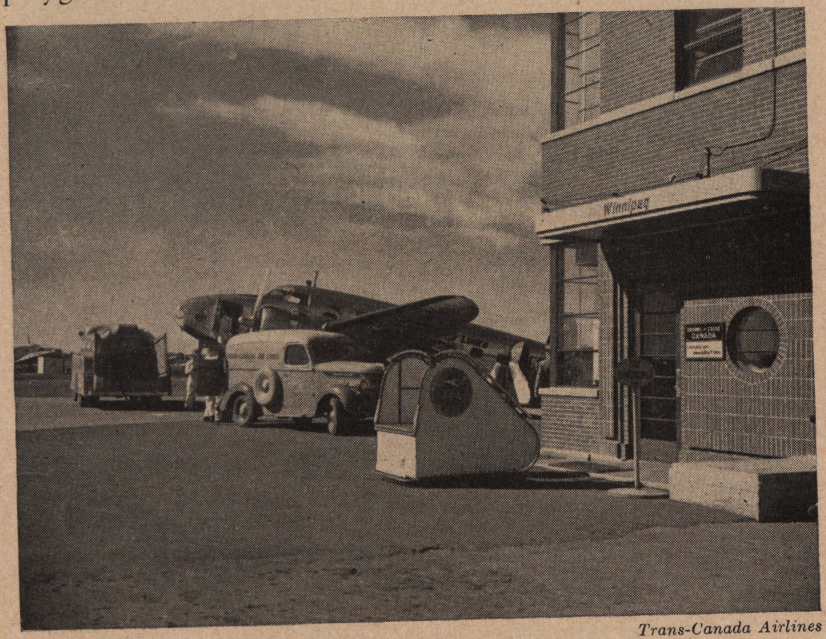
The fisherman, too, has a choice of many spots according to his tastes and energy. He may take the Winnipeg River for goldeye, black bass, pickerel, and pike; Clear Lake for rainbow trout, or the Clearwater for lake trout. In the icy, northern streams, speckled trout, Arctic charr, and Arctic grayling make lively fishing. Many of these beauties are good for a thrilling fight before giving in to the skilful fisherman. Yet the biggest thrill of all such sports is for the few who dare to go white-whaling in the cold waters off the coast near Churchill.

Hunting white whales is something special. Nothing else quite like it is to be found anywhere. At Churchill, almost in the shadow of the tall, gleaming grain elevator, white whales are hunted from canoes twenty feet long driven by outboard motors. At their best the canoes can go sixteen miles an hour. The whales go about twenty-five. A hunter must out-guess the whale in order to get near enough to drive a harpoon into the snow-white back.

When he is struck, the whale may "rush" the boat to upset it. Then there is real excitement. He may dive or "sound" deep below the surface. Then the harpoon rope is

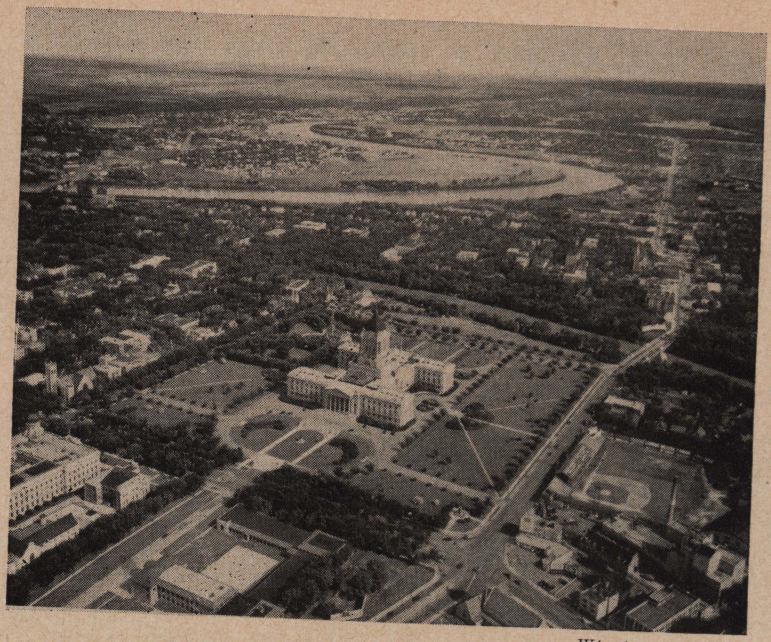
allowed to run out with an empty oil drum tied to it to act as a buoy. The drum races over the water. The canoe chases after in an effort to get near enough to let the hunter get a rifle shot at the whale when he rises to the surface. As many as ten shots may be needed before a bullet pierces the animal's head or spine. The big body is drawn alongside the canoe, roped, and towed ashore.

The white whale hunter has a story of rare and exciting adventure to tell to his friends "back home" about the playgrounds of Manitoba.



Trans-Canada Airlines

At Stevenson Field, Winnipeg



Air View of Winnipeg

Winnipeg Free Press

Chapter X

The Cities of Manitoba

No CITY just happens. Each one grows up for particular reasons in a particular spot. Manitoba has four cities, one large and three small. In order of size they are Winnipeg, St. Boniface, Brandon, and Portage la Prairie. The mining industry is busy building Flin Flon, a young city far north and west of Lake Winnipeg. Brandon and Portage la Prairie lie in the rich valley of the Assiniboine River. The twin cities of Winnipeg and St. Boniface face each other across the broad waters of the Red River.

National Film Board

Civic Auditorium, Winnipeg

The lives of these two are closely linked by the service they share as the gateway to the Canadian West.

All four cities started first as trading posts on early river highways except, perhaps, St. Boniface which grew partly in the shade of its famous twin cathedral towers. Brandon was once Brandon House to draw furs from the western Assiniboine Valley. Portage la Prairie was La Vérendrye's Fort la Reine where he had to cross, or *portage*, the prairie from the Assiniboine to Lake Manitoba and his northern trading posts. Winnipeg and St. Boniface at one time or another saw many different forts: Fort Rouge, Fort Douglas, Fort Gibraltar, and Upper Fort Garry, as well as one or two unnamed forts. Twenty miles down river stands lower Fort Garry, the only one which still remains complete.

These forts were built at different points to serve the early explorers and fur traders as places of supply, and for trade with the Indians. As the country was opened up, villages appeared around their old walls, or near them. When more people arrived, towns, and finally cities, appeared to take the place of the old forts. To-day these cities serve the people of Manitoba in the same way as the old forts once served the early traders. They are important points for business and for trade.

Manitoba Power Commission

Brandon

Brandon, with the most beautiful setting of the four, spreads out along the south bank of the Assiniboine. With its back against gently rolling hills, it looks out over the rich river valley to welcome the visitor. Long ago nicknamed "the Wheat City", Brandon serves as a market for many farm products. It handles supplies and machinery for the south and west of the province. As an important station on the Canadian Pacific Railway, it has many good

stores and small factories. At Brandon the Provincial Exhibition is held late in June, and the Manitoba Winter Fair every February. Brandon's seed company is one of the largest in the West.

Portage la Prairie, about seventy-five miles further east, does for the south-centre of the province what Brandon does for the west. In 1849 it became the only real settlement west of Red River. Smaller than the other cities, it is mainly a market and shipping point for products from the amazingly fertile "Portage Plains". From Portage supplies and machinery go out to the surrounding farming district. Since the coming of electric power from the Winnipeg River, several small factories have been started, especially one for clothing and one for early experiments in processing flax and hemp.

By far the largest number of Manitoba's city-dwellers, however, live in and around Winnipeg, or in St. Boniface. First the rivers, then the railways, helped to build a large business centre at the old "Forks" of the Red and Assiniboine. Where once Métis and Selkirk settlers built small huts of wood and clay, there now appear wide avenues of modern houses shaded by lovely elms.

St. Boniface was famous even in the early days for its beautiful cathedral rising on the east bank of the Red. The same tall towers that the Red River voyageur knew and loved are still a special landmark for both visitors and natives. Across the river, Winnipeg lies spread out across the main lines of both the Canadian National and the Canadian Pacific Railways. She has handled all east and west railway traffic for so long that she boasts of being one of the largest railway centres in Canada. Her Stevenson Field

Manitoba Travel and Publicity Bureau

St. Boniface Cathedral

has become the headquarters for Trans-Canada Air Lines and Canadian Pacific Air Lines as well as for smaller companies serving the northern trappers and miners. This has made Winnipeg more than ever a centre for travel and trade.

Winnipeg has grown to be the fourth largest city of Canada chiefly because of her shipments of grain. Every year, too, sees the growth of more manufacturing.

The volume of grain shipped through Winnipeg may be slightly affected by the development of shipping facilities at Port Churchill. Churchill is closer to Britain than is New York, and Manitoba wants to use her one seaport. Now

that Churchill, with its two-and-a-half million bushel elevator, can load ship after ship with western grain, it will help to deliver food directly to Europe. But, since the port is open for use only four months in the year, there will still be a great deal of railway shipping through "The Gateway of the West".

St. Boniface does for meat what Winnipeg does for grain. Through her stockyards go livestock from most of the western plains. While many citizens of St. Boniface earn their living in the offices and factories of Winnipeg, every day many Winnipeggers cross to their work at the large meat-packing plants in eastern St. Boniface. The business of handling farm products from western "hunger fighters", and of supplying them with the needed machinery, clothing, and building materials, has made these cities what they are to-day.

Canadian Pacific Railways

Railway Yards, Winnipeg

Of all the buildings in St. Boniface and Winnipeg, perhaps the most famous one is the Winnipeg Grain Exchange which up until World War II was one of the great grain markets of the world. There are other fine buildings: the St. Boniface Cathedral, the Legislative Buildings on the banks of the Assiniboine, the Civic Auditorium which every spring holds thousands of contestants in the Manitoba Musical Festival, the Federal Building, the new University buildings, and many units of a large and busy medical centre. Manitoba's famous Tyndall stone gives the same strength and beauty to many Winnipeg buildings that it gives to the Parliament Buildings at Ottawa.

With her fine buildings, her wide streets, her trees and her parks, Winnipeg spreads out on both sides of the

Winnipeg Free Press

At the Stock Yards

Assiniboine. Midway between Atlantic and Pacific, she watches over the air and railway lines of the Dominion, east and west.

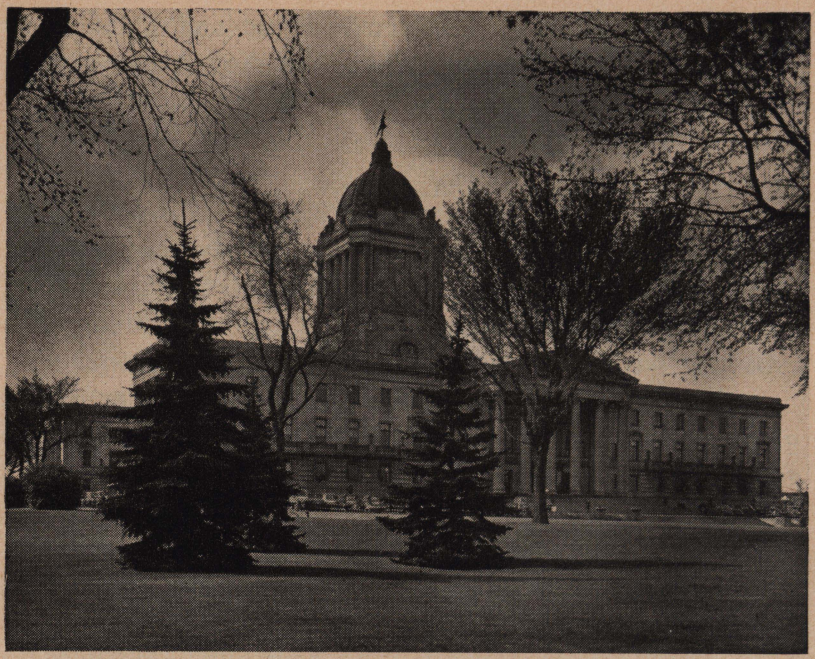
GOVERNMENT

For most things that people do in groups they need a leader. A ball team needs a captain. A club needs a president and secretary. A large company needs a group of directors to talk over business and decide what ought to be done.

So it is with a province like Manitoba. A leader with a group of men to help him is needed to make plans for the future, to make laws, and to attend to all the province's business affairs. Such a leader with his group of helpers makes up what we call a *government*.

The leader of the government is known as the *Premier*, a name which means "the first man". The Premier chooses several other men as *ministers* to help him. He needs a Minister of Health, a Minister of Agriculture, a Minister of Mines and Natural Resources, a Minister of Education, and several others. Each of these ministers takes care of the particular part of the government for which he is chosen, his *Department*, as it is called.

The most powerful men next to the Premier, however, are not these ministers but the *Treasurer* and a man called the *Attorney-General*. The Treasurer's work is to look after all the money that is collected and spent by the government. The Attorney-General has to see that the laws are kept and that anyone who breaks the law is tried and punished. With the help of many judges, and sometimes a jury, in the Law Courts, the Attorney-General checks up on wrong-

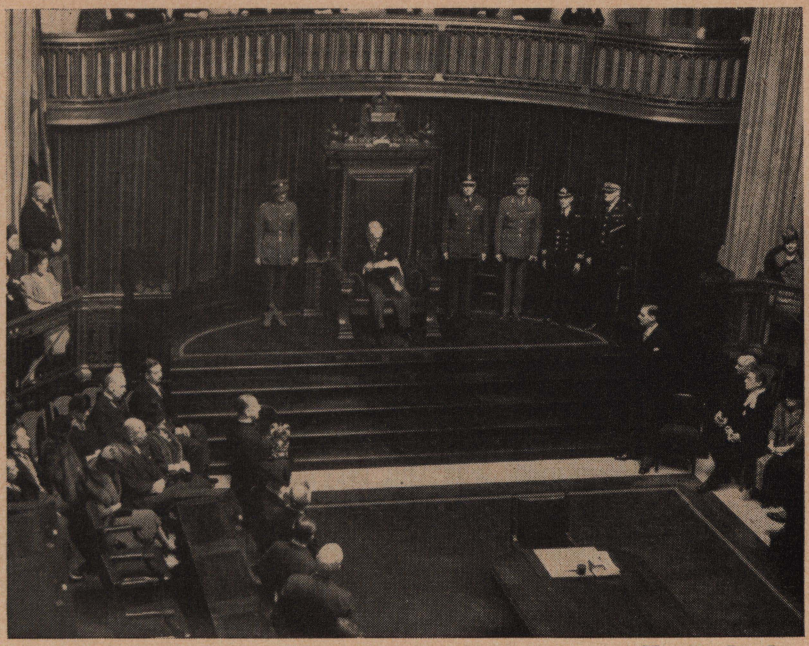


Manitoba Travel and Publicity Bureau

Parliament Buildings, Winnipeg

doers. The work done by the government and the law courts is very important to everyone in the province. It is one of the most important kinds of work any man can be asked to do.

These men, the government, are the leaders of a larger group of men called the *Assembly*. The Assembly helps and partly controls the government because it has to vote enough money for each year's business. The money needed comes from taxes paid by the people of the province. Unless the Assembly agrees to let the government collect its taxes, no government can carry on its work. Then, too, the Assembly helps to make the laws. When the govern-



Winnipeg Free Press

Opening of Provincial Legislature

ment plans to build a new road or to make a new law, the Assembly talks it over carefully and votes on it. No new law can be made and no old one changed without the vote of the Assembly. If the vote shows that the Assembly agrees to the new plan or law, the paper or *bill* on which it is written out is taken to the *Lieutenant-Governor* who signs it for our King. When the Lieutenant-Governor signs the bill, it then becomes a *law*.

The Assembly is chosen by the people of the province in their *elections*. In Manitoba the Assembly has fifty-eight members who come from various parts of the province to represent different districts and groups. Ten of these are